# WOOD PRODUCTS

THE TECHNICAL AND NEWS MAGAZINE OF THE WOOD PRODUCTS INDUSTRY

July 1950

Read, Check and pass on to . . . ☐ General Manager ☐ Sup't. ☐ Purch. Agent ☐ Machine Foreman ☐ Cabinet Foreman ☐ Finishing Foreman

ONE OF 12 WOOD-LOK* FEATURES

# PERMITS COOL WORKING CONDITIONS

## WOOD-LOK is a liquid, resin glue that comes ready-for-use COLD!

**WOOD-LOK** – a cold-run glue for joint assembly operations brings welcome relief to woodworking shops in summertime. It is used at room temperature. It permits the shop temperature to be regulated for the comfort of the workman – *not to pamper the wood or the glue!* Windows can be kept open . . . steam coils can be shut off . . . and a healthy, comfortable ventilation can be maintained to help keep workmen on the job.

**WOOD-LOK** comes to you ready for use. Nothing has to be added, soaked or heated. WOOD-LOK will not congeal too rapidly on cold wood. It sets quickly and uniformly at any normal temperature. WOOD-LOK stays resilient. Humidity changes do not cause it to form a brittle, easily-shattered bond. WOOD-LOK has a storage and working life of months – not 3 to 4 hours. It remains in liquid form without the use of ice pans. It provides a setting speed comparable with hot animal glues. It can be handled after a clamping time of only 20 to 30 minutes – instead of 6 to 8 hours.

**WOOD-LOK** is available – NOW! *Address:* 270 Madison Avenue, NEW YORK 16; 3641 So. Washtenaw Ave., CHICAGO 32; 735 Battery St., SAN FRANCISCO 11; and other principal cities. In CANADA: National Adhesives (Canada) Ltd. TORONTO and MONTREAL. In ENGLAND: National Adhesives, Ltd., SLOUGH. (*Reg. trade mark)

NO SHOP OVERHEATING

NO WOOD HEATING

NO GLUE HEATING

National ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

# "I'M DIFFERENT!"

## Certainly You Are, But To Date DeBURGH Finishing Systems Have Worked Production Wonders for Other Furniture Manufacturers Who Were Also "Different"!

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But a DeBURGH Complete Finishing System will still accomplish savings in manpower and increases in production you've never dreamed possible.

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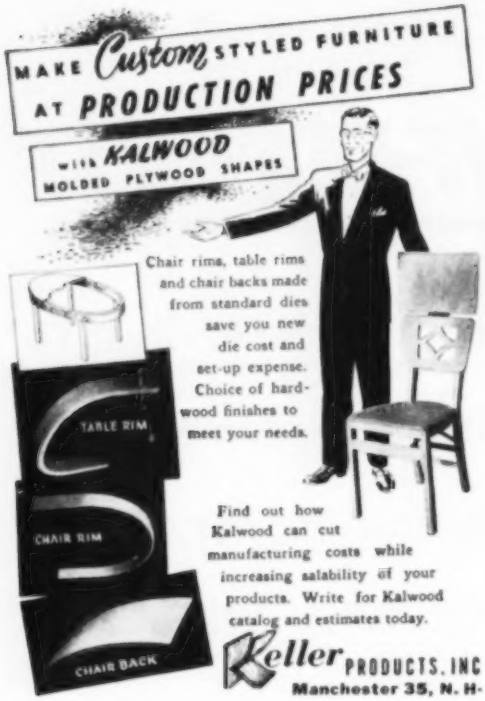
*Phone, Wire or Write Today!*

**GEORGE KOCH SONS, Inc., EVANSVILLE 4, IND.**

MASTER METALCRAFTSMEN SINCE 1873

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**Soft Textured—Big Mill High Altitude Stock**

**CALIFORNIA REDWOOD**

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**We Maintain a West Coast Buying Office**

*Don B. Wallace, Inc.*

GUARDIAN BLDG.
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WOOD PRODUCTS

343 S. Dearborn St., Chicago 4, Illinois

Vol. 55 JULY, 1950 No. 7

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REPRESENTATIVES

Ohio, Detroit, Pittsburgh, Northern Kentucky: O. Rhodius Elofson, P. O. Box 249, Hudson, Ohio. Phone Hudson 10.

West Coast: J. A. Converse, 412 Weatherly Bldg., Portland 14, Oregon. Phone Vermont 1814.

Southern California: Richard S. Meyer, 3137 Kelton Ave., Los Angeles 34, California, Phone Bradshaw 2-1456.

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# Thanks

ALL of a sudden it hit me just now, how lucky I am. Nine-tenths of the world is afraid—but I haven't got anything to be afraid of. A lot of the world is hungry—I don't really know what hunger is.

Where my grandfather lived, he could never hope to "rise above his station." Nobody decides what my "place" is, and best of all, nobody wants to . . . I can rise and grow as far as I'm willing to pay the price, in hard work and self-denial.

What I have is mine—I can spend it or save it, and if I save it I can keep it, for myself or my children; no man dares take from me what I have earned.

I can be lazy and just get by, or I can work and be paid more and more as I produce more. Or, I can go into business and be my own boss.

My children will start where I leave off; they can keep on, and go farther and farther, better and better.

I can think and say what I want. I need never shrink in fear of anyone. No one commands me, no one will command my children.

I don't much care what you call all this—free enterprise or the American way, or democracy; names don't matter: It's America. I like it. Don't let anybody dare try to take it away nor change it. I like it this way.

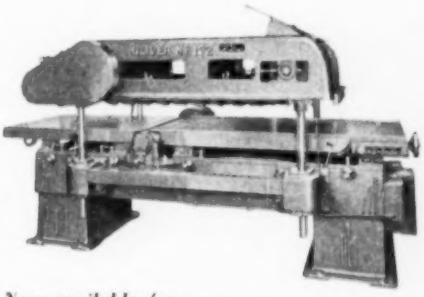
I fought for it once. My boy fought for it this time. Both of us will fight again if anyone, from outside or in, tries to cheat us of this we love. It isn't perfect but it's the best there is.

I like it. I'm grateful. *Stop monkeying with it.*


## "Oliver" Facing Planer

### surfaces 40 to 60 lineal feet a minute

This powerful 30-inch Facing Planer takes stock of almost any thickness and planes one side smooth and straight. Continuous automatic feed — 40 to 60 feet a minute. This Planer is also built with short infeed table, short outfeed table, or both tables short, for feeding sock from belt to belt. Handwheels and electrical controls furnished on either side of machine. *Write for Bulletin No. 122.*



***Now available for belt conveyor hook-up***

## Oliver Machinery Co.

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Furniture Dimension

Well manufactured kiln-dried stock, solid and glued, cut to size, run to detail.

*Skillful handling of your order.*

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Glued-up Panels

★

*Representatives from coast to coast.*

BRADLEY LUMBER COMPANY *of Arkansas*

WARREN, ARKANSAS

# Question & Comment

750—1

### Not Yet Available in Book Form

Editor, Wood Products:

During the many years we have been subscribing to your journal, your column "Would You Believe It" has interested a number of our employees, and we would appreciate it if you could inform us whether it is possible to obtain a book or pamphlets illustrating the possible thousands of interesting items that have been published during the course of years in this column.

Under separate cover we are forwarding to you as a matter of interest one of our latest projects in timber we are doing for the Government in Australia.

R. S. L.

750—2

### Curved Plywood Wanted

Editor, Wood Products:

Would you please send me some addresses of manufacturers who make curved plywood and church body form plywood seating? Also, where to buy concave seating and curved back for Church pews. We do manufacture church furniture and would like to add church pews. Please let me know how my subscription to Wood Products stands, I do like the magazine very much.

S. W. M. Co.

750—3

### Glad to Oblige

Editor, Wood Products:

In the May issue of Wood Products we find Part 4 of "Lumber Dry Kilns and Their Operation" by A. J. Panshin. Since we do not seem to be able to locate the magazine containing Parts 1, 2 and 3, we would greatly appreciate your mailing us these back numbers, charging any expense to our account.

S. C. L. M. C.

750—4

### The Utilization of American Beech by Industry

Editor, Wood Products:

We are very much interested in the two letters on Slovakian Beach noted on Page 6 of your May 1950 issue. Since we are engaged in an effort to further the use of American beech by industry, we would very much appreciate the names of the two companies that supplied the information on (Coral Wood).

U. S. D. A.

750—5

### Bent Plywood for Railroad Benches

Editor, Wood Products:

Please advise us as to who manufactures bent plywood such as could be used in railroad benches and church pew seats, where the seat and back would be bent on one form and in one piece.

Any advice you can give will be appreciated.

A. B. C.

COATED PRODUCTS COMMENTS

# Take the "Guesswork" out of Your Sanding Operations

To get the best possible production from your mechanical sanders, use of the correct product for the job is essential. CARBORUNDUM's coated abrasive cloth products are "tailor-made" for specific wood sanding operations. There is no guessing in selecting the right abrasive, bond, backing, coating and flexibility.

The special design and processing of these products assures longer sharper cutting action in generating uniform smooth surfaces. They can be an important factor in enabling you to turn out better products more economically.

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- Saddle seat sanding
- Flat belt sanding
- Molding sanding
- Scroll or string sanding
- Rag sanding of quarter rounds

Coated Products Division, The Carborundum Company, Niagara Falls, New York.

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TRADE MARK

**Making ALL abrasive products . . .**
**to give you the proper ONE**

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# DIVIDEND DESIGN *gives the* PORTER 405 SURFACER *5 Big Advantages*

- **Higher Speed Operation**
- **Premium Capacity**
- **Faster Adjustment**
- **Easier Operation**
- **Longer Life**

**Because of Dividend Design, a Porter 405 Surfacer will handle more lumber at lower cost than ordinary machines. Its extra margin of speed, capacity and strength produces heavier cuts, smoother work and a more profitable operation.**

**DIVIDEND DESIGN** makes the Porter 405 Surfacer extra fast for surfacing at higher speeds. A matched "V" belt drive rotates the cutterhead at 6,000 RPM to assure clean, smooth, perfect work. This high speed is made practical by the newly designed chipbreaker which keeps the machine running free at all times. The chipbreaker assembly travels in an arc concentric with the cylinder to eliminate all danger of damaging the cutterhead.

**DIVIDEND DESIGN** permits heavier cuts on a Porter 405 Surfacer. Free and easy cutting action makes possible the use of an increased blade angle without increasing the size of the motor. This means greater surfacing capacity with no rise in power costs.

**DIVIDEND DESIGN** simplifies adjustment of a Porter Surfacer. The operator quickly varies the rate of feed even as the lumber moves through the machine. All adjustments are simple and easily accessible.

**DIVIDEND DESIGN** makes it easier to surface pieces of many different sizes and shapes. It will handle 8" lengths without butting end to end. Individual magnetic controls prevent operation of the feed unless the cylinder is running. All rolls are power driven.

**DIVIDEND DESIGN** prolongs the life of a Porter Surfacer. It has the extra strength and extreme rigidity of welded steel, ribbed construction. This provides a durability achieved only with excessive weight by cast iron.

The table too, is fabricated from steel for greater rigidity, strength and accuracy. The center plate is a hardened and ground steel plate usually found only in larger surfacers. No wonder Porter surfacers are still giving dependable service long after other models have been discarded.

***Write today for complete information on the advantages of Porter DIVIDEND DESIGNED machinery***

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SAWS and KNIVES
And of all fine saws and knives, industry rates one kind above the rest—"Silver Steel." "Silver Steel" Saws and Knives have won this honor in the only way that counts—by lasting longer and cutting better; often in service that wears the life right out of lesser saws and knives. The reasons why go deeply into the science of metallurgy — and Atkins' research and improvement program that never ends. But the results are easy to measure. Just put Atkins "Silver Steel" Saws and Knives in your machines and watch them cut your cost of cutting.
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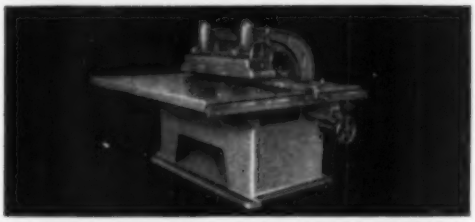
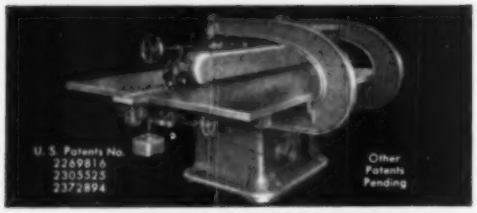
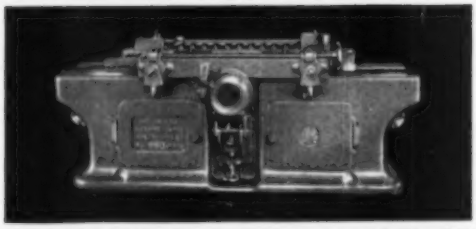
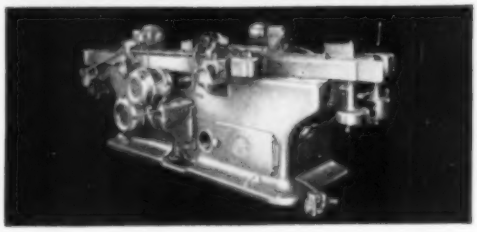
# COST-WISE WOODWORKERS KNOW THE DEPENDABLE Diehl LINE







## If you make

VENEER . . . PLYWOOD . . . MOULDINGS
FINE FURNITURE . . . DIMENSION

Call in your Diehl representative for facts and figures on the savings made with these and other Diehl woodworking machines. Ask him for specifications on the machines to fit your requirements — or write the factory.

Diehl-Vonnegut Moulder — (upper left) This is the famous 6" and 8", 4-head all-purpose Diehl-Vonnegut, with the vibrationless, trouble-free spindle, found only in Diehl-Vonnegut Moulders. Other sizes range up to 12", both four-and five-head models.

No. 750 Rip Saw—The unequaled rip saw for precision cutting and sawing of open end or hollow glue joints at up to 250 feet per minute. Handles stock from 1/8" up to 4 1/4", any length. Companion models include the Model 55, and the Junior size, Model 33.

No. 890 Tapeless Veneer Splicer—This fast, economical method of edge joining veneers, without the use of tape, in a neat, invisible splice, is an exclusive Diehl process. Little or no sanding necessary. Speeds up to 85' per minute.

No. 660 Glue Jointer and Edge Moulder—A double-purpose machine, with only a few minutes change-over required from cutting glue joints to cutting edge mouldings. Workmanship is unsurpassed. Speeds up to 100' per minute.

No. 69 Veneer Jointer and Edge Gluer—Clean, sharp, straight joints, permitting perfect splices, plus the application of glues in the same operation, are yours with the G. M. Diehl Model No. 69. Precision accuracy up to 50' a minute with mixed widths of veneer strip in bundles up to 2" thick.

ALSO: EDGE GLUING MACHINES, CUTTERS AND CUTTER-HEADS, CUTTER GRINDERS, CUT-OFF SAWS, SAW SETS, GLUE POTS AND CONVEYORS.

THE G. M. Diehl MACHINE WORKS, INC.

*On the Banks of the Wabash*

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**A PRODUCT** is judged by quality of materials, quality of manufacture, quality of the men who make, sell and service it.

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The plywood they make is grademarked and trademarked—double guarantee of quality on both exterior-type and interior-type panels manufactured by this company.

APMI plywood is available at sales warehouses situated in the nation's important population and building areas. It is sold and serviced by men who know plywood uses, and who would be happy to receive your inquiries for general information, for prices, for delivery schedules.

**APMI SALES WAREHOUSES**
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San Francisco, 925 Toland St., 24
Dallas, 4814 Bengal St., 9
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KANSAS CITY 3, KANSAS
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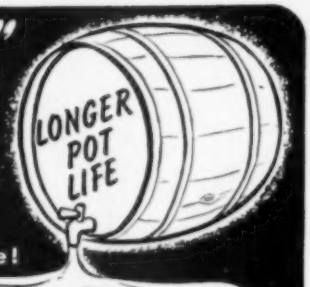
Panels up to 60 inches in width
and up to 144 inches in length

# ASSOCIATED
## PLYWOOD MILLS, INC.
***GENERAL OFFICES: Eugene, Oregon***

PLYWOOD PLANTS AT EUGENE AND WILLAMINA, OREGON

"Certus"
LIQUID ADHESIVE
NO MIXING
NON STAINING
...always ready to use!




..ready to go to work when the whistle blows! No heating. No mixing. No waiting for a fresh batch. Just pour it from the shipping container and it's ready for work.

Certus glue sets almost instantly when pressure is applied, yet has a long pot life. Its high bonding strength and colorless glue line all but make it part of the wood.

Where quick setting, non-staining, and high bond strength are factors to watch, *Certus* is the glue to specify. Low initial cost is equalled by its quick, easy handling for high production output.

In addition . . . *Certus* needs no catalyst (a saving there!) and its tough binding strength adds to product quality at no extra manufacturing cost! Request a sample of *Certus* today for a test in your plant.

TRADE MARK MONITE WATERPROOF GLUE

Certus is another MONITE product for industry—based on 35 years research and development of industrial adhesives that have made "Monite" outstanding.

MONITE WATERPROOF GLUE COMPANY
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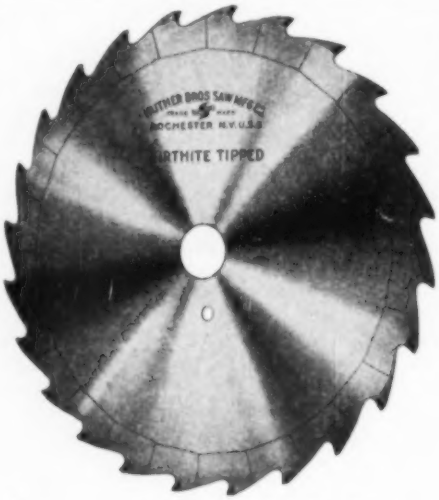


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TIPPED
SAW

INSERTED
TYPE
FOR
WOOD

Write for full information.

These saws are especially desirable for use on continuous feed machines where smooth cuts are required, and where hard woods are used.

HUTHER BROS. SAW MFG. CO.
ROCHESTER, NEW YORK, U. S. A.

# Wood
## You believe it?

Miss BIRCH married Mr. OAKS. The ceremony was performed by the Rev. MAPLES. The couple left for HICKORY, North Carolina to visit the bride's aunt Mr. SHINGLE. They boarded with Mrs. FOREST on ELM Street.

?

An estimated 75 million acres of denuded and poorly stocked forest land, about one-sixth of the commercial timberland in the United States, must be planted to trees if it is to grow timber within the lifetime of present-day children, reports of the Forest Service of the U. S. Department of Agriculture. Forest acreage planted in this country since 1926 totals almost 6,500,000 acres.

?

A Chinese coffin made of planks four inches thick may weigh as much as 600 pounds.

?

Timber from Finland is bought by the fathom which is a pile measurement containing 216 cu. ft.—that is a space 6 ft. × 6 ft × 6 ft. This fathom contains timber and air spaces so that to obtain the best purchase care must be taken in piling the timber on arrival in order to reduce the air spaces to a bare minimum.

?

There are now over 20 million acres of tax paying forest land certified as tree farms in 27 states.

?

In the Douglas fir region today there are 250 professionally trained foresters employed by private owners of tax paying forest lands.

?

In 1948 the value of forest products in Oregon and Washington wood using plants was just a few dollars shy of 1 billion 500 million dollars.

?

The Great Mormon Tabernacle—Salt Lake City, one of the largest auditoriums in the world was built entirely without nails.

?

At least 1,000 different kinds of trees are found in the forests of the United States. Of these only about 100 are used for lumber or other manufactured products.

?

One-third of the United States is forest land. Washington, Oregon, California, Idaho and Montana have half the timber in the United States and supply half the nation's demands for wood products.

Smooth finish on work and easy cutting even against the grain are advantages that are yours with the Onsrud W-200 Electric Detail Shaper. This high speed hand shaper permits the use of small diameter cutters to give you clean work produced quickly. Available as a single speed 10,000 or 15,000 RPM machine . . . or as a two speed 7,500 and 15,000 RPM machine. Onsrud features include Vacuum Pulley Drive . . . vertically adjustable table . . . and Onsrud precision spindle. Check the W-200 . . . see how the small diameter cutters it uses can save you money. The W-200 includes every worthwhile feature conceived in a modern shaping machine. Reduce your production costs by assigning jobs to the W-200 that would otherwise tie up your heavy duty shapers and routers. Any of the parts shown here are typical of the work that can be production shaped or routed on the Onsrud W-200 Electric Detail Shaper.

WRITE FOR BULLETIN W-200
FOR COMPLETE INFORMATION AND
SPECIFICATIONS

Onsrud®

ONSRUD MACHINE WORKS, INC.

3922 PALMER STREET — CHICAGO 47, ILLINOIS

*SALES OFFICES IN ALL PRINCIPAL CITIES*

# "rapid planing— to accurate thicknesses"

Whitney No. 97 Planer in the plant of Eastman Kodak Co., double surfacing at fast feeds rough stock to accurate thicknesses — from shutter boards for Brownie Cameras to bench tops.

More production per operator — smoother planing — accuracy — faster feeds — trouble-free service and lower planing costs — that's what woodworking and furniture people are looking for in planing equipment today. The Whitney No. 97 Double Surfacer meets these requirements as testified by hundreds of satisfied owners. The Whitney No. 97 can produce for YOU as it is doing in so many plants today. Write for full particulars.

***Features*** **• Micro-feed Selector — any feed at touch of handwheel • Whitney Automatic, Self-reversing Knife Grinder • Automatic Motor Brakes • Ball and Roller Bearings thruout • Finger-tip Controls • Safe, Convenient Operation**

***Feeds:*** **30 to 90 feet per minute. Planes stock: 1/16" to 7" thick. Sizes: 30", 36", 40" and 44" widths.**

*Planing Specialists for more than 100 years*

**BAXTER D. WHITNEY & SONS, INC.**

WINCHENDON, MASSACHUSETTS, U. S. A.

**Planers • Shapers • Variety Saws • Mortisers • Back Knife Lathes**

WOOD PRODUCTS

NATIONAL MAGAZINE OF THE WOOD PRODUCTS INDUSTRY

343 S. DEARBORN STREET, CHICAGO 4, ILLINOIS

Vol. 55—No. 7 JULY, 1950 25c a Copy, $2 a Year

# The Editor's Viewpoint

### What Of The Market?

As we enter the last half of this momentous year, the records show that all branches and parts of the wood products industry are operating at high rates of capacity. The semi-annual furniture markets held in Chicago and Grand Rapids were well attended, nearly setting a new all-time record. Business was brisk with some firms resorting to allocation means to protect their older customers. Prices were firm with indications of early increases following the trend of raw material costs.

Reflecting the demand for furniture, radio and television cabinets, veneer production in May was the greatest in history with a heavy drain on inventories. Some foreign woods are in short supply because of poor logging conditions.

With nearly 395 thousand new housing starts in the first four months of this year, demands on construction lumber and plywood are extreme. Lumber production was 20% more in that period than last year. Demand for west coast and southern species is approaching an all time high with prices stiffening.

As this is written, the war drums are sounding and our initial sortie into the Asiatic cess-pool of Korea is far from satisfactory. Again we sent a boy to do a big man's job. Was ever a major government so callously inept in its foreign affairs or so profligate with the resources of the nation and its people as is our present administration? If war must come, we as a major industry can take solace in the fact that our production facilities are the best they have ever been, and that our imposed duty will be well met.

---

The R. F. C. will pay 6 million dollars for the bankrupt Lustron plant that it previously loaned 37½ million dollars of the tax-payers money, which means *your* money. Nice business!

---

### Average Factory Worker Has 13 Helpers

Thanks to electrical energy, the average American factory worker now has the equivalent of 13 full-time assistants to help him earn his daily bread.

American factories have an installed horsepower of 18,000,000, and there are 14 million industrial workers in the country. Because one horsepower is mathematically equivalent to 10 working men, the average man at the machine has the aid of 13 other "men."

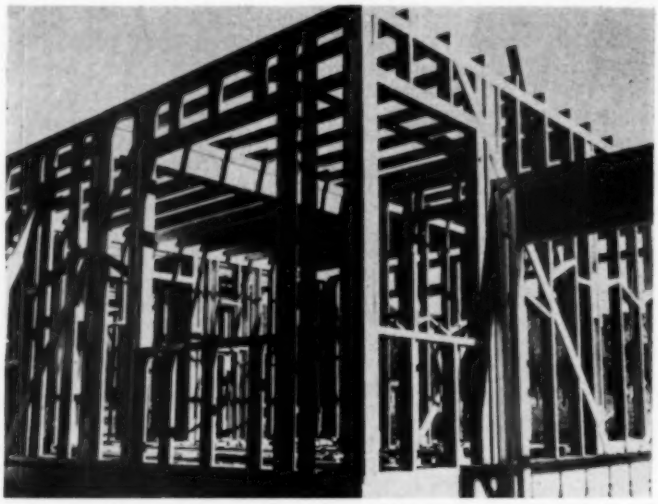
Some industrial workers have even more help, according to E. C. Brodin, director of manufacturing research for SKF Industries, Inc. At several plants, for example, the average employee has 4.3 horsepower at his command—the equivalent of 43 men.

Better products and easier and more pleasant jobs result from the wider use and continuing development of power-saving equipment such as individual motor-driven machines, fork-lift trucks and a host of other electric-powered devices that reflect the ingenuity of American industry.

*"Will you leave, Miss Glutz, while I tell this young man what I think of his product."*

# *White Fir*

## Finding Wider Acceptance as a General Utility Wood.



Strong, dimensionally stable, readily nailed and well manufactured, White Fir is an exceptional framing material. (Courtesy Western Pine Association)

White Fir, second only to Douglas Fir of the Western Pine Region in production volume, is more than just another word in the Associated Species lineup. It is the fastest growing species in consumer acceptance of the entire group.

Averaging 108 million feet in production through the pre-war years of 1937-41, output since 1945 has jumped to 605 million, nearly a 600 per cent gain. Production in 1949 was an estimated 650 million.

White Fir is not a specialty wood. Its uses are not restricted to any phase of building, industrial or construction fields. Properly manufactured and seasoned, it is instead a general utility lumber suitable for all purposes from the roughest of form lumber to the best in economical finish work.

White Fir timber is found in mixed stands throughout the Western Pine region intermingled with one or more of the three Western Pines and other Associated woods. Harvested with the other species, it is frequently available in mixed cars together with an assortment of many of them.

A brief run-down of the properties provide a clue to its value as a general purpose wood. It is non-resinous and, because of its thin-walled and fairly uniform-sized cells and its very narrow summerwood band, fine textured. Springwood is flat white in color and the summerwood has a slight reddish-brown tinge.

The wood weighs 27 pounds per cubic foot and has a specific gravity of .38 at 12 per cent moisture content. In strength, it ranks with the several important softwoods of similar weight and density in bending resistance, compression and stiffness. Average volumetric shrinkage when dried from a green state to 12-15 per cent is 4.9 per cent.

It is easy to work with either hand or machine tools and machines to silky soft surfaces readily adaptable to paints, varnishes or stains without special priming treatment.

Ability of White Fir to hold nails is comparable to woods of similar density. It is listed by the Forest Products Laboratory in the top group of four classifications as a wood which "glues easily with different glues under a wide range of gluing conditions."

The wood of White Fir is odorless and tasteless after it has been dried. It may be treated with standard commercial preservatives. Its light, open-pored structure makes it one of the finest natural insulators in the softwood field.

In the residential building field, White Fir is at its all-around best. Starting with concrete forms and ending with paneling and woodwork, it furnishes ample strength, good nailability, high dimensional stability and fine appearance for any purpose. It excels as studding, joists, plates, bridging, headers and fire stops. For sheathing, subflooring and roof decking, the wood gives exceptional service in use, superior insulation value and flat, true surfaces for application of siding, flooring and shingles.

The light weight of White Fir, its accurate milling, dimensional stability and paint receptive surfaces make it a fine quality siding. It is available in a broad range of patterns and styles. Inside the house, White Fir paneling, moulding and architectural woodwork is in high demand because of its light color and careful manufacture. It is particularly preferred for modern interiors where pastel finishes are used.

Many woodwork plants are turning to White Fir for the manufacture of window and door frames and sash, combination doors, storm sash and screens and furniture and find it equally adaptable to cabinetwork, Venetian blinds, counter tops, fencing, trellises, mantles, garage doors, ironing boards, medicine chests and other built-ins.

The industrial user finds White Fir excellent for warehouse and factory flooring, car bracing and dunnage, casket shook, shelving,

*(Continued from page 36)*

# RESEARCH

## *as an individual project*

*By*
**Thomas D. Perry**

During the last ten years research in the woodworking industry has undergone a thorough revaluation. Before the decade research was not too highly regarded by woodworkers. The marvellous new developments in wood products, resulting from the war effort, demonstrated some of the possibilities that had been latent in the industry and that were of inestimable assistance in bringing the woodworker into the military program. Some examples can be cited; molded plywood for air and watercraft; laminated timbers for keels, ribs and stems in boats; laminated timbers for arches, trusses and girders; impregnated and compressed laminated wood for antennae masts; plywood tubing for radio masts and landing gear; light weight but stiff strong flooring, as in aircraft; laminated metal, wood, plastic, fibre layers in many combinations; prefabricated housing; to mention only a few. Not all were originated in this period, but all received decided impetus from the war effort. Woodworkers found undreamed of opportunities to use their knowledge and equipment in defending our way of life.

Government research projects, on a cost plus basis, may have been extravagant in some ways, but they revealed latent possibilities and encouraged many new techniques which established research as an integral part of the extension of wood products into new and useful applications. Sponsored development, as at Gamble Brothers, Louisville, in oak laminates for landing craft, as well as at Francis Hagerty at Cohasset, in radar equipment, to mention two among many, demonstrated that research can and does produce worth while results. Unfortunately some of these techniques have not yet found economic stability but the important fact is that research is now recognized as an essential part of progress in woodworking.

Research, in the popular mind, calls forth a picture of an immaculate laboratory, filled with shelves, work tables, book nooks, testing equipment and the like, staffed with tan gowned technicians, peering into test tubes or watching gauges on strength testing machines. War developments, on the other hand, were usually in the factory, on a pilot plant scale, working by trial and error methods, with the amazing perseverance that inevitably brought success in one way or another. Such conspicuous research facilities and procedures, while useful and effective, were far from the whole story.

The other and perhaps the most important phase of such new developments was the wide prevalence of research ideas among multitudes of woodworkers, at machines, on assembly lines, among inspectors and testers, even though their connection with research laboratories was hard to trace. The spirit of research was nurtured and established as a constructive force in woodworking and it is still thriving and growing in the ranks of woodworkers.

### Wood Study Kit

There are many evidences of this development of alertness among woodworkers. An example is the Wood Study Kit developed by the Timber Engineering Company, of Washington D.C. an affiliate of the National Lumber Manufacturers Association. This provides a set of samples of prevalent wood species, a manual and a magnifing glass. Some might be inclined to ask "what has such a kit to do with research?" The answer is "plenty" Research is dependent on a background of knowledge. Worth while ideas seldom spring up spontaneously without any background. The ability to identify certain species and to recognize their suitability for definite applications is fundamental to a more intelligent utilization of the woods that are available. To use a more costly wood, where a cheaper wood would be acceptable, is economic folly. Fifty years ago, within the memory of many of us, there was a curious classification, softwoods and hardwoods. Botanically the classification is still correct, softwoods from trees with needle leaves, hardwoods from trees with flat leaves, mostly decid-

*Research is not symbolized wholly or even chiefly by well equipped laboratories. Research is an attitude of mind, that is always seeking a better, or quicker, or cheaper way of doing the conventional, or of exploring new products that can be incorporated into such an industry as woodworking. Research depends mainly on individual thinking that is constructive and on a study of the backgrounds from which new processes and products are developed.*

*Have we limited our conception of research to formal institutional projects, or are we willing to concede that research is a personal attitude of mind, an alertness toward progressive methods? Research is exploring the unknown or unrecognized. Research is more individualistic than it is institutional. Research thinking precedes and gives substance to laboratory activity and successes.*

uous. True, basswood a hardwood was softer and far easier to work than yellow pine, technically a softwood, but this inconsistency was accepted as inevitable.

Now with modern finishing techniques, with the recently developed resin adhesives and with the prevalence of plywood constructions, flat and curved, the selection of species and a knowledge of their characteristics becomes imperative. Certain species are favorable for lumber core stock, woods that glue readily, are relatively free from warping tendencies, and exhibit minimum shrinking and swelling under varying moisture contents. Yellow poplar, sound wormy chestnut (if obtainable) and soft maple make good cores. Solid parts, like small table tops, chair arms and legs, bed posts, desk legs and the like, require a strong dense wood that will withstand severe wear and strain, such as hard maple, oak, birch, walnut and the like. No species surpasses yellow poplar, as a cross band in plywood, at least in the moderate cost range. Some operators find gum cross bands satisfactory in the cheaper grades of plywood. Figured woods, mahogany, walnut, oak and many imported tropical woods can be used for face veneers and the less attractive portions for adjacent solid parts, providing cost is not a limiting factor.

All in all, it is of prime importance that both the old experienced hand, as well as the new comer to the industry, be able to identify species, and to understand how to employ the inherent characteristics of the species most efficiently. Frequently old timers are expert in selecting species by various methods, some good, some bad. But the new comer needs a quicker and better way to distinguish woods, rather than to struggle after knowledge through so many years of practical experience. For such this Wood Study Kit is indispensable, and many old timers can improve their understanding of species characteristics by combining this new scientific approach with their years of experience.

The use of such a kit as this, had it been available, in determining the suitability of any species, could well have shortened the long trial and error period that elapsed in discovering that cedar was best for lead pencils or ash for base ball bats.

The Wood Study Kit, sold by the Timber Engineering Company, is the epitome of convenience, packed in a snug little box, containing some 50 samples of wood species, a descriptive manual, a knife and a magnifying glass (x10), as shown in Fig. 1. The knife facilitates cutting smooth spots on the end wood for closer examination under the magnifying glass. While the samples are all numbered, perhaps an involuntary concession to the modern method of finding easy answers, it is desirable to forget the numbering, prepare a smooth section on the other end and actually identify each species by comparing the magnification with the illustrations in the manual. While a magnified end section is the most certain method of iden-

Fig. 1. Wood Study Kit, with Manual and Tools

**Table 1. Suggested Utilization of Species**

**Native Hardwoods:**

1. Alder, red; alternate for poplar.
2. Ash, brown; baskets, woven goods, alternate for white ash.
3. Ash, white; vehicles and sports goods.
4. Aspen; excelsior, alternate for basswood.
5. Basswood; trunks, luggage, lumber cores and veneer crossbands.
6. Beech; woodenware, spools, mallets, etc.
7. Birch; plywood, interior trim, aircraft.
8. Cherry; furniture, school equipment, engraver's blocks.
9. Chestnut; lumber cores, burial caskets.
10. Cottonwood; excelsior, packaging, cheap veneers.
11. Elm, hard; slack cooperage, baskets, boats.
12. Elm, soft; slack cooperage, baskets, vehicles.
13. Gum, red; low cost species with many uses.
14. Gum, tupelo; low cost species with many uses.
15. Hackberry; approximate alternate for ash.
16. Hickory; handles, vehicles, skis.
17. Magnolia; alternate for and related to yellow poplar.
18. Maple, hard; flooring, furniture, cutting blocks.
19. Maple, soft; lumber cores and furniture parts.
20. Oak, red; alternate for white oak, railroad ties.
21. Oak, white; ships, desks, furniture, flooring, tight cooperage.
22. Pecan; resembles hickory, decorative wood carvings.
23. Poplar, yellow; lumber cores, veneer cross bands.
24. Sycamore; furniture parts, baskets, berry boxes.
25. Walnut, American; furniture, gun stocks.
26. Willow; artificial limbs, packaging.

**Native Softwoods:**

27. Cedar, eastern red; cedar chests, lead pencils.
28. Cedar, incense; lead pencils.
29. Cedar, Port Orford; special uses, battery plates, arrows, blinds.
30. Cedar, southern white; cedar chests, boats, storage cabinets.
31. Cedar, western red; shingles, siding, structural uses.
32. Cypress; weather exposed structures, boats.
33. Fir, Douglas; plywood, structural timbers.
34. Fur, white; small structural parts and interior trim.
35. Hemlock, eastern; small structural parts, bark for tanning leather.
36. Hemlock, western; small structural parts, pulp and paper.
37. Larch, western; approaches redwood in durability.
38. Pine, lodgepole; small structural parts.
39. Pine, longleaf; timbers and large structural parts.
40. Pine, northern white; sash, doors, interior trim, patterns, etc.
41. Pine, ponderosa; sash, doors, interior trim etc.
42. Pine, shortleaf; timbers and large structural parts.
43. Pine, sugar, patterns, sash, doors, interior trim.
44. Pine, Idaho white; sash, doors, interior trim, matches.
45. Redwood; weather exposed structures, wood pipe.
46. Spruce, eastern; box shooks, sounding boards, small structural parts.
47. Spruce, Engleman; general structural uses.
48. Spruce, Sitka; special uses, such as aircraft veneer.

**Foreign Woods:**

49. Mahogany, Central American; furniture, pianos, boats.
50. Teak; boats and vermin proof furniture and structures.
51. Balsa; insulation, light weight cores for plywood.

**Table 2. Decay Resistance of Wood**

(Forest Products Laboratory WOOD HANDBOOK, 1940)

**Heartwood durable under decay conditions:**

27. Cedar, eastern red
29. Cedar, Port Orford
30. Cedar, southern white
31. Cedar, western red
9. Chestnut
32. Cypress
45. Redwood
25. Walnut, black

**Heartwood, slightly less durable:**

33. Douglas fir, dense
21. Oak, white
42. Pine, shortleaf, dense

**Heartwood of intermediate durability:**

33. Douglas fir, unselected
13. Gum, red
37. Larch, western
42. Pine, shortleaf, unselected

**Heartwood below intermediate group of durability:**

3. Ash, white
6. Beech
7. Birch, sweet and yellow
35. Hemlock, eastern
36. Hemlock, western
16. Hickory
18. Maple, hard
20. Oak, red
47. Spruce, Engleman
48. Spruce, Sitka

**Heartwood low in durability:**

4. Aspen
5. Basswood
10. Cottonwood
34. Fir, white
26. Willow

tification, there are other characteristics which help, weight, density, color, odor, feel and appearance that eventually become almost instinctive in picking out wood species.

The manual is excellently written in non technical terms, describing the visual characteristics of each species under magnification and outlining the major fields of utilization for every wood. There are also clear microphotographs of each species, of the same magnification (x10) as is obtained with the magnifying glass supplied with the kit. Identifying the samples can be as fascinating as it is informative.

Some may feel that there are too many samples, that they are confusing, and that a smaller assortment would be more desirable. It might be compared to the English vocabulary. It is claimed that a knowledge of some 600 to 800 words is adequate to express ideas clearly, and that such a simplified English is much easier for a foreigner to learn. However gifted writers and speakers use many thousands of English words which add force, clarity and fine distinctions to their expressions. An example of the masterful use of the English language is Winston Churchill. Perhaps in a similar way, although the number of species is far less than the variety of words, the different species offer a better selection to the woodworker.

**Table 3. Stress at Proportional Limit (12% m.c.)**

(Forest Products Laboratory Technical Bulletin 479, 1935)

| | Species | Static Bending | Impact Bending |
|---|---|---|---|
| **Softwoods:** | | | |
| .. | Pine, Norway (Wisconsin) | 9,400 | 15,900 |
| 39. | Pine, longleaf | 9,300 | 15,400 |
| .. | Yew, Pacific | 9,300 | 12,100 |
| .. | Pine, Pond | 8,300 | 13,200 |
| 33. | Douglas fir, coast type | 8,100 | 12,700 |
| .. | Tamarack (Wisconsin) | 8,000 | 12,500 |
| 37. | Larch, western | 7,900 | 15,100 |
| .. | Pine, mountain (Tennessee) | 7,900 | 14,200 |
| .. | Pine, loblolly | 7,800 | 12,100 |
| 42. | Pine, shortleaf | 7,700 | 13,600 |
| 29. | Cedar, Port Orford | 7,700 | 13,500 |
| 36. | Hemlock, mountain | 7,400 | 13,300 |
| **Hardwoods:** | | | |
| .. | Locust, black | 12,800 | 21,100 |
| 16. | Hickory, pignut | 11,300 | 25,200 |
| 20. | Oak, swamp red | 11,200 | 23,900 |
| 25. | Walnut, black | 10,500 | 16,400 |
| 21. | Oak, swamp white | 10,200 | 22,300 |
| 6. | Birch, sweet | 10,100 | 24,800 |
| 6. | Birch, yellow | 10,100 | 17,200 |
| 18. | Maple, sugar | 9,500 | 20,600 |
| 3. | Ash, white | 9,200 | 16,500 |
| 22. | Pecan | 9,100 | 17,400 |
| 8. | Cherry, black | 9,000 | 13,600 |
| 19. | Maple, red | 8,700 | ... |

## Efficient Utilization Is a Compromise

While some of the 50 species in the study kit are relatively plentiful in most locations, they are not all available everywhere. There are limitations, as well, of cost, workability, durability, finishability etc., that may discourage the use of the ideal species for a special purpose. Hence the ability to identify species must be blended with an appreciation of the characteristics of each, and with a flexibility of application, so that the best available species within a permissible cost range, can be used for the product under consideration.

There is still another approach to the selection of species. If a species, such as alder or aspen, is relatively plentiful in a second growth area, for what end uses can it most advantageously be employed? Theoretical suitability availability in the area, economic considerations, utilization of near by supplies and workable qualities are among the factors that must be balanced. Furthermore they are not likely to stay in balance for any considerable period of time. An example: chestnut was a prime favorite for lumber cores in plywood. Due to its inertness, hardness and workability, but it is rapidly becoming scarce, and some other species must be substituted, even though it is not a reasonable equivalent.

The 50 odd species, listed in

**Table 4. Strength / Specific Gravity Relationships**

(F. P. L. Wood Handbook, 1940)

| | Species | Stress Static Bending | Specific Gravity | Stress Specific Gravity |
|---|---|---|---|---|
| 25. | Black Walnut | 10,500 | .55 | 19,100 |
| 33. | Douglas fir (Coast) | 8,100 | .48 | 16,900 |
| 48. | Sitka spruce | 6,700 | .40 | 16,700 |
| 39. | Pine, longleaf | 9,300 | .58 | 16,000 |
| 6. | Birch, yellow | 10,100 | .63 | 16,000 |
| 32. | Cypress | 7,200 | .46 | 15,600 |
| 3. | Ash, white | 8,900 | .58 | 15,300 |
| 23. | Poplar, yellow | 6,100 | .40 | 15,200 |
| 18. | Maple, sugar | 9,500 | .63 | 15,100 |
| 10. | Hickory, pignut | 10,900 | .73 | 14,900 |
| 21. | Oak, white | 7,900 | .67 | 11,800 |
| 26. | Willow | 3,900 | .41 | 9,500 |

the study manual, are relatively common woods that are widely used. They are listed in Table 1, together with the most suitable types of utilization. It is not to be expected that everyone will agree with this classification Differences of opinion and practice are useful and commendable in making woodworkers think. Some species are in scant supply, chestnut, hickory, pecan, eastern red cedar, Port Orford cedar, northern white pine, Sitka spruce, etc. Alternates should be carefully studied for their suitability.

### Durability of Wood

Lack of durability in wood is closely associated with the tendency to decay. Moisture and temperature are the principal factors affecting the rate of decay. In many wood products decay is an important problem of servicability, such as sash, doors, timbers, steps, factory structures, outdoor furniture, ladders, athletic equipment and the like. All sapwood is more susceptible to decay than heartwood. The relative resistance to decay for the heartwoods of various species is listed in Table 2, and is keyed to the designations in the manual of the wood study kit.

It is not a matter of prime importance to be able to identify species of wood to be used where decay conditions are likely to exist?

### Strength of Wood

Structurally speaking, the strength of wood is important in many applications. Chair legs, stretchers, athletic equipment, piano legs, and the like, must take severe punishment. A few principal species are listed in Table 3, according to their ultimate bending strength, expressed as maximum stress at proportional limit:

Tables 3 and 4 are far from complete and are given only to indicate the general trends that are important in designing and making wood products. However they demonstrate the significance of knowing the characteristics of the different species. For a detailed data and instructions reference should be made to the sources indicated.

The data in Table 3 did not take into consideration the weight, or specific gravity of the species. This strength / weight ratio, for a few outstanding species, is shown in Table 4.

### Conclusions

There is clearly a close relationship between learning to identify species of wood, a form of individual research, and the utilization of the most favorable types of wood for a given product. This economic utilization is subject to continual change, and decisions should be revalued from time to time.

The Timber Engineering Company is due distinct credit for supplying the methods and materials to emphasize the importance of species, as well as to encourage old timers and new comers in the industry to gain a fundamental knowledge of its basic raw material.

## Labor Relations

### Ten Commandments for Contract Negotiations

Collective Bargaining has become so universal in our daily life that the very term can be considered accepted American idiom. Still, there are probably as many interpretations of the term as there are people using it, states a report to members of the Labor Relations Institute, New York.

The Institute report goes on to state that this also holds true for the term, "Contract Negotiations."

In order to lay down some basic rules for sound and practical contract negotiation procedure, it is necessary to begin with a premise or an interpretation of what is good contract negotiation procedure.

The Institute report sets down a broad but practical goal to shoot at:

"Any agreement, any contract, or any blueprint for desirable labor relations, arrived at in the name of practical job conditions and in the name of real problems confronting management and its own employees, is the result of successful contract negotiating.

"On the other hand, any agreement wrangled or maneuvered in the name of prestige, face saving, special philosophies or special rights, will always be looked upon with suspicion."

To achieve such a broad goal in a workable union agreement requires 1) a clear understanding of exactly what such a task entails, and 2) sticking close to the rules of sound contract negotiations.

### Georgia Pacific Buys Acme Door

Hoquiam, Wash. — The Acme Door Company has been purchased by the Georgia Pacific Plywood and Lumber Sales Company of Augusta, Ga. The purchasing company operates two mills in Olympia and one in Bellingham, Wash.; one in Springfield, Ore., and two in eastern United States.

### Millwork Men Meet . . . Wood Window Group to Advertise

Memphis, Tenn.—The Southern Sash and Door Jobbers Association closed a two-day meeting in Memphis June 16. Four speakers of outstanding prominence in this field made addresses. They were R. D. Scamehorn of Chicago, representing the National Wood Work Manufacturers' Association; O. Harry Schrader of Tacoma, Wash., managing director of Douglas Fir Plywood Association; Charles E. Deulin, vice president of the Fir Door Institute and T. L. O'Gara, president of Ponderosa Pine Woodworking Co. The association voted to hold its winter meeting in the Roosevelt Hotel at New Orleans Dec. 7-8.

The following officers were elected: M. C. Davidson, Houston, Texas, president; John Kilpatrick, Oklahoma City, vice president and Clark E. McDonald, Memphis, secretary-treasurer.

### Wood Window Institute

Concurrent with the meeting of the Sash & Door Association, the American Wood Window Institute held its first annual convention. A large number of members were signed up and an advertising campaign was set in motion, the purpose of which is to acquaint all America with wood windows made according to prescribed rules and labelled accordingly.

F. R. Weddington, Waco, Texas, was elected president of the institute. Fred Bissell, Dubuque, Iowa, vice president; M. C. Davidson, Houston, Texas, treasurer and Clark E. McDonald, Memphis, secretary.

### Class of 51 Harwood Inspectors To Graduate

Memphis, Tenn.—The National Hardwood Lumber Inspection Training School will close its fifth term on July 14. The graduation exercises for a class of fifty-one men will be held at Hotel Peabody, John W. McClure, manager of the association at Chicago will present the certificates.

Frank R. Ahlgren, editor of the Commercial Appeal, will deliver the commencement address.

Also on the program will be William G. Whitman of the De Soto Hardwood Flooring Co. He will discuss, "Memphis—the Heart of the Hardwood Trade."

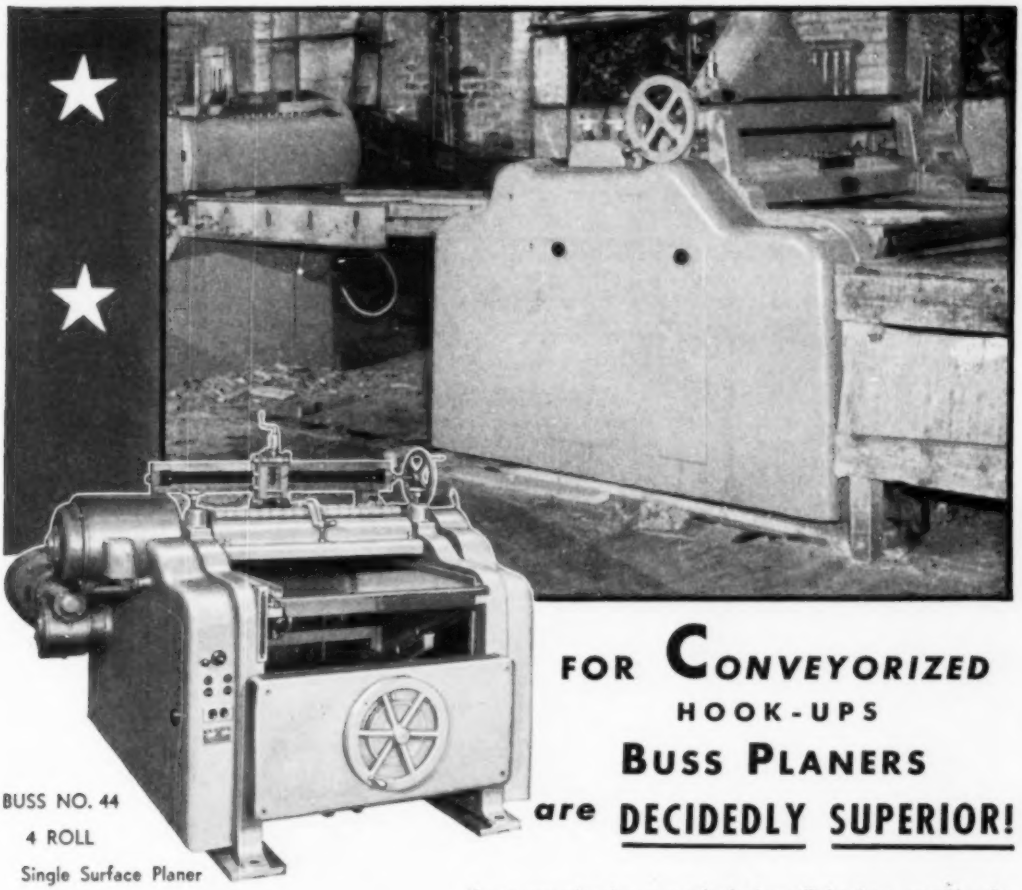
### Finishing Knotty Pine

To finish knotty pine, give it a thin coat or two of white shellac or lacquer sealer. Follow that with one or two coats of flat or semi-gloss varnish. Allow each coat to dry thoroughly. Sand all coats lightly except the final one. If a lighter color is desired use a commercial bleach before you apply your clear coating.

The ferry captain shouted down to the crew:

"Is there a mackintosh down there big enough to keep two young ladies warm?

A crew man answered: "No, but there's a McPherson who's willing to try."



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# LUMBER DRY KILNS AND THEIR OPERATION* PART 6

By

A. J. Panshin

### Roof and Ceiling

A satisfactory kiln roof must be weatherproof and well insulated against heat losses. If the roof is poorly insulated it will tend to cool the kiln air to the dew point. The resulting condensation will drip from the ceiling on the top layers of lumber. These boards, when later subjected to lower humidity, will check and warp. Leaky roofs or ceiling likewise makes it difficult to maintain constant humidity and temperature conditions within the kiln.

Kiln roofs are generally built flat on the underside (the ceiling side) and nearly flat, with a pitch of ¼ to ½ inch per foot, on the upper surface. Dry kiln roof are constructed either of wood, reinforced concrete or tile and concrete.

a. *Wooden roofs*—These are either crib, laminated, or the conventional joist type. Crib construction is used only when lumber is cheap, and when a slow-burning building is desired. The crib-type roof is made either of 2"x 6" or 2"x 8" stock, laid on edge and spiked together. The stock should be well seasoned to minimize the danger of decay and formation of cracks due to shrinkage.

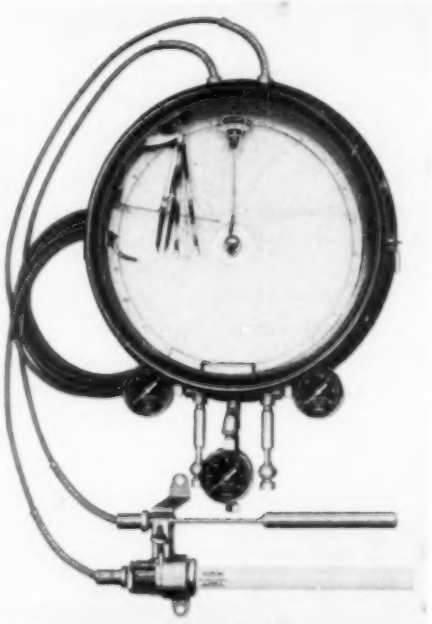
The joist roofs are made of 2"x 10" or 2"x 12" hard pine or Douglas fir, spaced 16 to 24 inches on centers and well bridged. Even the best constructed wooden roofs are subject to decay.

Experience has shown that the best results are obtained when the roof is constructed as follows: a layer of 1-inch sheathing is nailed on top of the joist and covered with a vapor barrier, such as composition or roll roofing mopped with asphalt. This is covered either with 2-inch sheathing or two thicknesses of ¾-inch fiberboard, and finished with composition roofing (Fig. 13).

In some cases a ceiling, nailed to the lower side of the joists, is also provided (Fig. 13). If this is done, a vapor barrier (roll roofing or aluminum foil) should be placed either between the two layers of sheathing forming the ceiling or applied directly to the underside of the joists and then covered with the sheathing. Asbestos boards attached with brass screws to the outside of the sheathing boards, would also make a good moisture barrier. The space between the joists can be partially filled with loose insulation, allowing for adequate ventilation of the space. The roof above the joists should be made as already described, except that the vapor barrier is omitted. If possible, wood used in kiln roofs should be pressure treated with creosote; when construction costs are high the added cost of such treatment may be justifiable because of the much longer life of the roof.

b. *Reinforced Concrete Roofs*—These must be well insulated because of the poor heat insulating value and low water resistance of concrete. If economical, a concrete aggregate made with an insulating product will reduce heat losses appreciably. The concrete slab must be thick enough to be structurally safe, and provided with expansion joints.

The finished concrete slab must be covered with a vapor barrier consisting of several layers of roofing felt mopped down with



(Photograph—The Foxboro Co.)

Fig. 16. Auxiliary operated recorder-controller.

*Presented by special arrangement with Michigan State College, Agricultural Experiment Station, Section of Forestry, East Lansing.

# BORING MACHINE NEWS

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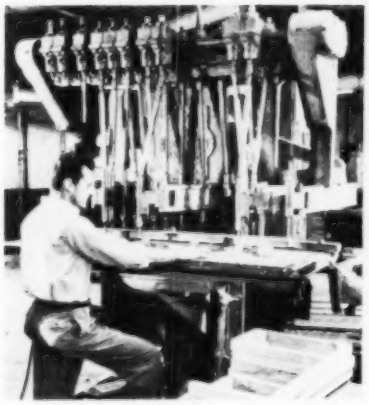
For quick set-ups, nothing can beat a straight-line borer. Spindles quickly spaced along frame at any position. If your boring is in a straight line this is your machine. Write for bulletin on Style CDH Borer. *(Photo Courtesy Heywood Gardner, Wakefield, Mass.)*

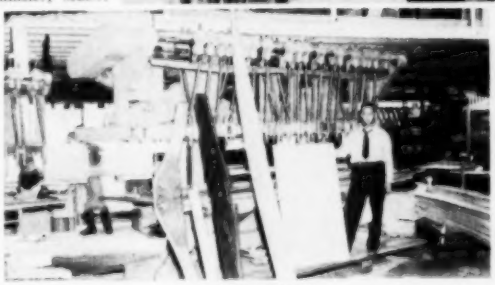
STYLE CH ▶

The standard gang borer for the furniture industry! Priced right, it is economical, dependable, flexible and accurate — get the whole story on this versatile machine by writing for bulletin No. 110 today . . . no obligation of course. *(Photo Courtesy Whitney Carriage Co., Leominster, Mass.)*



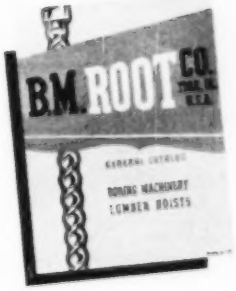
◀STYLE CX

Gang borer for wider work. Allows more spindle "reach" and more holes bored at one pass. Like all Root Gang Borers it is equipped with our Patented Hydraulic feed. *(Photo Courtesy White Sewing Co., Cleveland, Ohio.)*



▲ STYLE CCXH

Boring many holes in one pass is accomplished on this 28 spindle 12 foot gang borer. Large parts for agricultural implements, prefabricated houses, step-ladders, cross-arms, cable reels, boats, and railway freight-cars are bored with one pass on a machine like this. Send sketches of your large work for free estimate.

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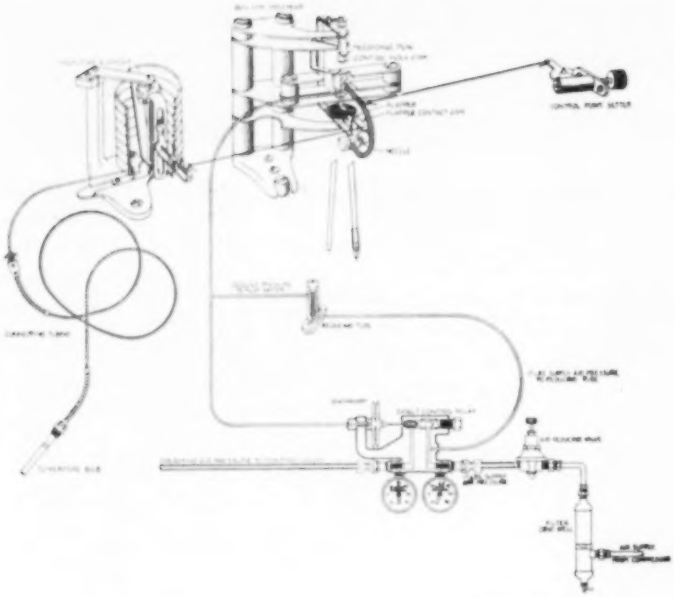


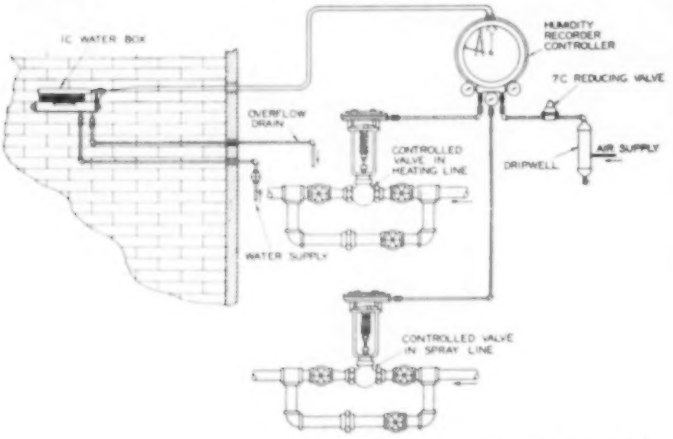
(Drawing—The Foxboro Co.)

Fig. 17. Details of pneumatic temperature control system.

asphaltum or pitch; several inches of gravel or slag are usually spread on top of the finished roof. If further insulation is desired, 2 or 3 inches of cork board, or three or more thicknesses of fiberboard could be laid on top of the concrete slab and then covered with roofing, as previously described (Fig. 14).

c. *Terra-cotta Roofs*—A very satisfactory kiln roof can be made of terra-cotta tile, separated by reinforced concrete beams. For the Michigan climate it is recommended that 12-inch tile be used. The roof is finished with a vapor barrier insulation and roofing felt, as described in the previous section on reinforced concrete roof. Expansion joints must be provided (Fig. 14).

d. *Ceiling Condensation*—In kilns in which the heating system is located below the lumber, condensation may form if the roof is not adequately insulated. In this case special ceiling coils should be installed to heat the roof independently of the rest of the kiln. Generally, 1-inch pipes, suspended below the ceiling and spaced 2 or 3 feet apart, are used. When fans and heating system are installed above the load, no such special ceiling coils are required.




(Drawing—The Foxboro Co.)

Fig. 18. Typical arrangement of dry kiln controller and automatic valves.

### Doors

Construction of satisfactory dry kiln doors, which are strong, light, easy to handle and high in insulating properties, is very difficult.

The most satisfactory doors are those made of aluminum and insulated, or of asbestos paneling fixed to a steel frame. Good wooden doors can be made of cypress, redwood or creosoted wooden slats about ¾ to 1 inch thick, built into a steel frame and covered with asphaltum paper or aluminum foil on the outside.*

Most of the kiln doors are moved on patented hangers; hinged doors are much less satisfactory.

It is desirable to build into the kiln door a small inspection door, so that the operator can enter the kiln during the operation of the kiln without opening the large door.

### Temperature Measuring and Controlling Devices

The temperature-measuring devices employed in dry kilns are either indicating or recording thermometers. Visual indicating thermometers are usually of the mercury filled glass type, with graduations in degrees either etched on the glass stem or marked on a separate metal strip, to which the thermometer is attached; the former type is more accurate. Both temperature and humidity can be determined by means of indicating thermometers. If humidity is to be determined two thermometers are employed, one of which is provided with a wick placed in water, while the other is dry.

Recording thermometers used in kiln work are of the extension-tube type. They consist of a sensitive element, called a bulb, which is connected to the instrument by

*Further information on construction of dry kiln doors may be obtained from the Dry Kiln Door Carrier Company, Indianapolis, Indiana, or dry kiln manufacturers. (See Appendix Table 1).

a capillary tube. The bulb is filled either with mercury, gas or vapor. In dry kiln work the vapor-filled type is the most suitable. As in indicating thermometers, both temperature and humidity can be determined by using instruments with two bulbs, one of which is covered with a cloth wick or a porous sleeve kept constantly moist.

In some kilns temperature and humidity are controlled entirely by manual operation of the valves; however, because of the fluctuation in the outside temperatures it is impossible to maintain constant drying conditions with hand controls. Most of the modern kilns, therefore, are equipped with automatic controls. The two types of automatic controls employed in kiln drying are the self-contained and auxiliary-operated kinds.

### Self-contained Controllers

These controllers do not require an outside source of power to operate them. The pressure inside of the bulb located in the kiln is transmitted through the capillary tube to a diaphragm in the motor head, in the valve. The expansion of the diaphragm causes the stem of the valve in the steam line to move. This movement of the valve stem is opposed by a constant counterpressure provided by an adjustable spring or sliding weight. The instrument can be set to operate on any desired temperature by changing the tension of the spring or the position of the weights (Fig. 15).

The principal advantage of this type of instrument is its lower initial cost, compared with that of the auxiliary operated controllers, and the fact that no auxiliary power is required for its operation. Self-contained instruments, however, are less sensitive, do not respond quickly to changes in temperature and do not perform well under conditions requiring wide fluctuations in the amount of steam needed. This type of controller, therefore, is seldom used in the compartment kilns.

*(Any illustrations appearing in this part of the article that are not referred to, or that are referred to and do not appear in the text herewith, will be subject to reference in the installments to follow. The seventh part of this article will appear in the August issue.)*

## Shaper Shorts

THE WABBLE SAW permits smooth grooving at the shaper. Grooves cut with the wabble saw can be made at a high rate of feed without damage to the outside edges of the groove. The groove produced is exceptionally smooth because the saw breaks of the width of the groove into a large number of small cuts, since each tooth cuts on a different plane from the other. The wabble saw will also cut deeper grooves than are possible with ordinary cutters.

★

BECAUSE IT IS DIFFICULT to hood the shaper efficiently, it is best to have the vertical telescoping pipe equipped with ball joints at the top and bottom, to permit adjustment of the hoods to any desired point around the spindle and cutters, as required to catch the chips and shavings.

★

PROPER KNIFE BALANCE at the shaper is obtained only with uniform weight of the knives, uniform shape and uniform projection.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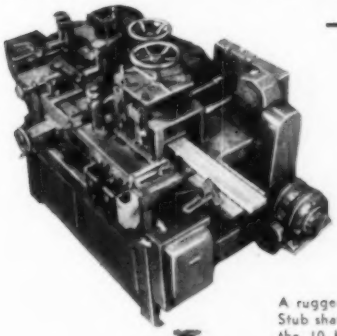

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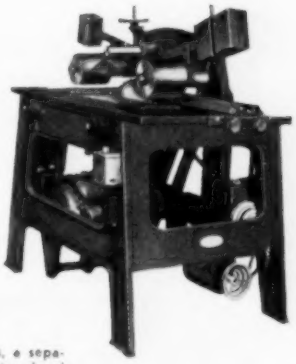

★ **The TIMESAVER SPEEDRIPPER**

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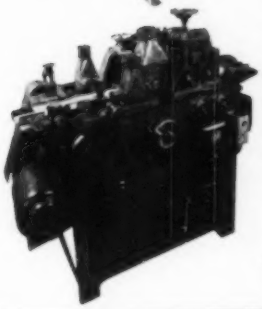

★ **The TIMESAVER SHAPEMAKER**

A revolutionary machine with heads that travel 10,000 RPM's, a separate motor to drive each head, positive feed and positive top head chip-breaker and all the trimmings to make for an easily set up production machine for the shaping of pieces up to 4" wide. If your job can be handled by a SHAPEMAKER no other machine will do it better. We feature the use of inexpensive wing cutters, shaper collars or conventional round or square heads on this machine.

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# Foreign Woods

## Origin, Use, Properties and Nomenclature

By **George N. Lamb**

### KOKRODUA—Afrormosia elata
### Leguminosae (Pea) Family

*Kokrodua* is native to the Gold Coast, Ivory Coast, Cameroons and the Belgian Congo. It is a very conspicuous tree. The trunk is orange-red near the base and upward it shades off to a yellow color. The basal buttresses are thin but extend far up the tree giving a fluted appearance. The tree attains a height of 100 to 150 feet and diameters in mature trees range from 3 to 6 feet.

The heartwood is brownish, becoming brownish-yellow with darker streaks with age. The sapwood is very narrow and lighter in color. The wood is fine textured with straight to interlocking grain and is moderately heavy and hard. Sp. gr. 0.62 at 15% moisture content. The wood works, turns and polishes well.

It strongly resembles teak in appearance but lacks the oily nature of teak and is slightly heavier. Air drying and kiln drying are said to present no unusual difficulties and is considered stable in use. It is resistant to decay but because of tannin content, may discolor or corrode in contact with iron. The wood produces a yellow dye.

*Kokrodua* has aroused some interest in England as a substitute for teak but shipments to this country have been confined to small experimental lots. It is one of the secondary west African woods that might have some possibilities in selected logs for veneer and lumber purposes.

Other names:

Nigeria—*African Satinwood, Yellow Satinwood, Ayin, Anyeran, Anyesan, Egbi, Elo Uta, Duakobin, Duabay, Makarfo.*

Other woods called *Kokrouda:*

Distemonanthus benthamianus—*Alan* or *Movingui.*

### KEJAAT—Pterocarpus angolensis
### Leguminosae (Pea) Family

*Kejaat* is found chiefly in the low forest of the eastern Transvaal. For a long time it was little known and in no demand. In recent years it has become in great demand in South Africa. This local demand probably will preclude it ever being an export wood of any importance. Not a large tree—a log 2 feet in diameter and 12 to 15 feet long is unusual. Average logs are only 7 to 8 feet long and about 17 inches in diameter.

The sapwood is usually distinct and may vary in width from 1/2 to 4" in diameter. The heartwood varies from a light uniform brown to a dark reddish brown and is variable even in the same piece of wood. The wood is very durable and is resistant to white ants. *Kejaat* is of medium weight. Sp. gr. averaging about 0.57. It would doubtless be received as a superior cabinet wood for veneer purposes if its availability were greater.

Other names:

*Kejatenhout*
*Bloodwood*
*Transvaal Teak*
*Sealing Wax Tree*

### AMBOYNA—Pterocarpus indicus
### Leguminosae (Pea) Family

*Amboyna* comes to market in limited quantities and in the form of burls. These burls come from the island of Amboyna, a southerly island in the Moluccas about 4° south of the equator. Obviously *Amboyna* grows in other than burl form but such wood seems not to have been described in detail.

The tree itself has a wide range in the East Indies and varies much in size according to soil conditions. Fertile moist soils may produce trees 90 feet high and above 3 feet in diameter. The bole is generally buttressed and often irregular in shape.

The narrow sapwood is yellowish and the heartwood is yellowish brown. Orange or yellowish striping appears in fresh wood but with exposure the wood


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darkens down to a rich brown. The wood is rather heavy, ranging from a specific gravity of 0.65 to 0.72. *Amboyna* burls show areas of swirly grain sweeping around single or groups of burls of various sizes. Like most burls, *Amboyna* often shows imbedded bark spots. This wood has had an in and out career in the United States. It is sold only as veneer and principally as a decoration.

Other spelling: *Amboina.*

**ENGLISH YEW—Taxus baccata**
**Taxaceae (Yew) Family**

*Taxus* probably is from a Greek word meaning "bow" since the wood has been held in high esteem for this purpose. The English archer was famous for his *yew* bow. The tree is, however, better known as a small evergreen tree or shrub used in ornamental plantings. Its foliage is poisonous to horses and cattle but the berries are not. This species is now widely planted in Europe and America. In time a *yew* tree may reach the height of 60 feet and nearly 5 feet in diameter but it is of slow growth and seldom becomes more than a large shrub.

The sapwood is almost white in color. The heartwood varies in color from bright tan to red brown. On exposure it becomes more uniformly a red brown. The grain is rarely straight and because of irregular growth, there is heavy waste in conversion. Mostly *yew* is converted into decorative veneer and is particularly valued for border work in table tops. Burls are rare but occasionally found.

Other names:
None.

# BAND SAW BRIEFS

IF THE BANDSAW HAS A TENDENCY TO LEAD SLIGHTLY IN THE CUT, this condition can be remedied by honing lightly the leading side of the blade with a fine oilstone. This is quite a delicate operation and should never be tried if the blade leads to any great degree which indicates the bandsaw is out of adjustment.

* * *

IF THE BANDSAW BLADE IS JOINTED BEFORE REMOVING IT FROM THE BANDSAW, the subsequent sharpening will be definitely improved.

* * *

THE MOST COMMON CAUSE OF BANDSAW BREAKAGE is trying to force too wide a blade around too short a radius in the cut. Other causes might be putting too little or too must strain on the blade.

* * *

A BANDSAW BLADE CRACKS MORE OFTEN ON THE TOOTH THAN ON THE BACK EDGE because the saw most often has double the strain while in the cut and is continually overheated as a result of excessive grinding.

TO START A WELD ON A BANDSAW BLADE, THE WORK SHOULD BE STARTED AT THE CENTER and worked toward the edges gradually, working progressively from the center to one edge and then from the center to the other edge. Heat should be applied very slowly at first, holding the torch about a foot from the saw blade until it is thoroughly heated to a red color. Then the torch can be brought closer and the blade worked down gradually to a welding heat.

* * *

HOLLOW PLACES IN THE BACK OF THE BANDSAW BLADE ARE CAUSED BY the expansion of the tooth edge caused by friction from too rapid feed.

* * *

BANDSAW BLADE BREAKAGE IS OFTEN CAUSED BY MISALIGNMENT OF THE GUIDES. When the saw is at rest, or turning without actually being in use, there should be just enough clearance between the wheels and the back of the blade to see daylight between them. Neither of the wheels should turn except when the saw is actually cutting.


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What's Ne

*Plywood Boom*

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Big Demand From Builders, Furniture and Trailer Firms and Householders

Gray Market Is Reviving

BY RICHARD H. BYRING
Staff Correspondent of THE WALL STREET JOURNAL

PORTLAND, Ore.—"Sold out!"

That sign hangs on the doors of most of the West Coast's 88 Douglas fir plywood mills. Their versatile product is well on its way to becoming as scarce as in wartime. And prices are rising.

These companies, which produce two-thirds of the nation's softwood plywood, are smothered under an avalanche of orders. Most mills have already sold all they can produce in the next two to four months. The order file for the 88 mills now stands at 350 feet; a year ago it was 118 mil

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Left: This 60 inch, Tanguile Mahogany buffet is extremely well compartmentalized. The three shelves are adjustable. Right: This three tier modern table with French curve is available in light and dark finishes, and was well received by discriminating buyers. (Courtesy American Furniture Mart)

# One of Best Summer Furniture Markets in History Closes in Chicago

One of the best Summer Markets in history was the verdict when the score is tallied on the 1950 event at the American Furniture Mart.

It was a pace-maker for new patterns and well-designed merchandise—the most exciting market within the memory in this field.

It was a sales-record-smasher for many manufacturers; a better-than-average summer market for the majority; normal for some, and sub-normal for a very few.

### Business Summary

The typical home furnishings store covered itself for 90 days ahead on inventories. This was in sharp contrast to last year's summer market, when many followed hand-to-mouth buying policies and attempted to skim along on 30 to 60 day's needs believing themselves overstocked. Fall consumer demand proved their estimates wrong, and many found replacement merchandise unavailable.

Merchants this year were optimistic about prospects for fall business when the market opened, and nothing happened while they were here to make them change their minds. Flair-up of hostilities in Korea early in the second week failed to change the course buyers set. There was little more that could be done at that point in anticipation of possible consumer buying stampede. Some manufacturers had stopped taking orders; they were already holding off on commitments beyond October 1 to see what happens to raw material prices.

**Winter Furniture Market January 8 through 19**

*The Board of Governors of the American Furniture Mart Chicago, re-iterated its support of a two-market-a-year program, and confirmed dates for the January 1951 Market for the period January 8 through 19.*

*Subject to confirmation at their next meeting, the Governors' dates for the following markets are: Summer, 1951—June 18 through 28; Winter, 1952, January 7 through 18. The 1952 Summer Market dates will depend on the quadrennial political conventions which may be held in Chicago that year.*

### Style Trends

The steady ascent of contemporary styling, and the appearance of "the luxury look" characterized the 1950 Summer Market at the American Furniture Mart.

There were 10 per cent more numbers shown in the June event than were present at the January showing in the same year. In case goods alone an additional 115 suites were shown.

### Case Goods

The annual count by the American Walnut Manufacturers' Association, now in its 21st year, showed modern leading the style parade in wood furniture with

55.8 per cent of the total. Unstyled or commercial furniture—was second with 11.9 per cent. (Even as late as 15 years ago commercial furniture was running even with modern and 18th Century, each accounting for about 25 per cent). In this summer's survey, late 18th Century English was third with 10.5 per cent, and American Colonial and Federal amounted to 8.4 per cent.

Modern is no longer startling or bizarre. It is functional in the world's most apt sense and it has begun to take on a "classic" look that means it will be around for a long time. It now has some of the elegance of traditional furniture, with carved, embossed effects; colorful plaque inserts, and elaborate, high-styled hardware. The gap between modern and traditional is closing a little, too, with traditional now borrowing from modern by going functional with partitioned drowers, multiple-use chests, etc.

The dividing line between traditional and modern finishes is also less marked. More warmth has been put into modern finishes, making them less pale and flat. Pinkish and amethyst tones have enlivened grays and tans.

Studio headboards have been built into many lines. Junior-size suites are no longer also-rans, they command a major spotlight. Brass legs on case goods are turning heads and winning appreciative glances. Some of the pieces are completely hardware-less or pull-less; others combine tiny brass pulls on the small drawers with massive wood or leather pulls on the larger drawers.

Something completely new is a high-gloss laminated plastic in wood grain finish which has the advantages of durability, resistance to acids, burns, etc. The base to which the finish is applied is plywood panel, with molding the same color as the case (gray or blond), and the drawers have solid oak interiors. Its appearance on bedroom and dining room case goods appears to be more than an innivation.

### Not So Dead!

Before Miss Sophie Glotz, spinster, age 84, died, she asked that "Miss" be left off her tombstone because she hadn't missed a lot of things people thought she had.

### Quebec Timber Production on Increase

Quebec, Ont.—Avila Bedard, Deputy Minister of the Lands and Forest, said timber production in Quebec would increase by "about 10 per cent" during 1950 over the 1949 output.

### Diehl Employees Awarded Scroll for Preventing Accidents

Employees of the G. M. Diehl Machine Works, Inc., Wabash, Indiana, recently were awarded a scroll for working continuously for 18 months, 260,000 man-hours, without a lost-time accident. A framed scroll was presented to the employees at a factory meeting by Wayne Stouder, representing the American Mutual Liability Insurance Company.

The Diehl Company has manufactured machinery for the woodworking industry for more than 40 years.

### Ingalls Has New Woodworking Plant

Ingalls, Mich.—Menominee county has a new woodworking industry at Ingalls, where Nelson & Parrish are cutting maple bowling pin billets at a small plant erected for the purpose in the village.

Lloyd Parrish, who operates the barrel saw bolter that cuts the billets, and Bernard Nelson, are partners in the enterprise.

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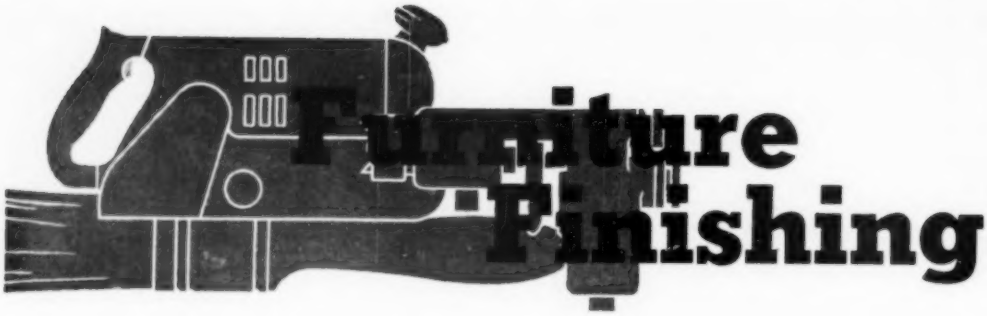


## Some Important Facts to be Considered in the Use of

# RUBBING AND POLISHING EQUIPMENT

*By*
**Paul H. Graham**

The quality of a hand-rubbed finish produced by a skilled rubber who takes pride in his handiwork has never been excelled by machine rubbing methods. On the other hand a semi-skilled operator can turn out a most satisfactory job by machine rubbing in a fraction of the time with less effort and fatigue.

The rubbing machine in short is a modern high speed production machine; it takes up much less working space, reduces fatigue, increases production with lower labor costs, and produces a quality rubbed finish when operated by a skilled operator. Most of the objections to the machine are based upon work turned out by a careless or improperly trained operator.

Rubbing machines are usually powered by compressed air or electricity and are available in both stationary and portable models. The type of machine to use is usually determined by the material to be rubbed, the shape and area of the surface, physical shop conditions, and the size of the units. Rubbing machines are generally divided into two types: the long-stroke machine for large flat surfaces and the short-stroke machine for small flat or curved surfaces.

The adjustable, long-stroke rubbing machine of the stationary class is commonly used for rubbing large surfaces such as tops of tables, chests, desks and bed ends. This machine is equipped with pads, adjusted to move back and forth along the grain of the wood, with two pads so positioned that each travel half the length of the carriage. This type of machine is available in sizes from 6 to 10 ft. and can be adjusted to rub only the tops of furniture pieces, or can be lowered to take the entire piece so that any desired surface may be rubbed.

Through the use of two pads the surfaces can be rubbed right up to the edge of the work in the direction of the pad and as far as the front edge of the piece, if it is cut in straight, even lines. Where irregularities interfere, it is usually necessary to clean them up by hand or with a portable machine. The use of two pads eliminates long marks from the work and permits two small pieces to be rubbed in the same operation.

Other refinements make it possible to rub pieces that are not square or rectangular. These include automatic stroke shifting mechanisms, automatic stroke controllers, and traveling tables. Counterweighted guide bars permit rubbing rounded as well as flat surfaces.

### Skill of Operator Important

The skill and care of the operator determines the efficiency of the machine's operation. Both the abrasive agent and the rubbing action must be properly applied to produce an evenly rubbed surface. The surface being rubbed must be positioned parallel with the pads and be kept constantly covered with the correct mixture of rubbing compound and lubricant during the rubbing operation. The pressure of the rubbing pads must be steady and applied to the extent required by the finish to be rubbed and the pads must be operated at the proper speed.

To set up the long-stroke machine for rubbing, it is adjusted first by either lowering or raising

the table to position the pads about one-half inch above the work. The machine is next adjusted for length of stroke and speed of pad travel. Rubbing pressure is controlled by means of a lever which the operator holds during the rubbing operation and has a capacity up to 150 lbs. pressure. This is one of the greatest advantages of the long-stroke machine.

The operator must make sure the machine is always in proper adjustment for the work to be rubbed; that a proper amount of a suitable mixture of rubbing compound and lubricant is constantly applied over the surface; and that the pressure and speed of the pads are adapted to the kind of finish being rubbed with the pads applied to the work steadily to insure even rubbing.

An expert operator, using a long-stroke rubbing machine with the proper application of rubbing action and abrasive and maximum pressure compatible with the finish being rubbed, can rub down a large flat surface, such as a table top, finished with varnish in from three to five minutes and one finished with lacquer in from five to seven minutes. An interesting study of hand rubbing versus machine rubbing showed the hours per 100 pieces required to rub a 2 coat lacquer finish, according to sq. ft. of area rubbed on each piece, to range from 3.45 hours machine rubbing and 5.75 hours hand rubbing for 3 to 4 sq. ft. surfaces to 7.15 hours machine rubbing and 12 hours hand rubbing for 10 to 12 sq. ft. surfaces.

Short-stroke machines of the portable variety with small pads which perform the rubbing operation with a fast reciprocating motion are commonly used for rubbing small flat surfaces and ends and fronts of furniture. These are designed for use in vertical as well as horizontal positions and are usually light-weight to minimize operator fatigue. Some of these are driven by compressed air while others are electrically driven and can be plugged in directly into any outlet or electric light socket fitted with a suitable plug.

Aside from their accurate simulation of the reciprocal hand stroke, this reciprocal action helps to keep the rubbing slush (compound or pumice and lubricant) between the pads to permit the proper amount to be applied to the work at all times for efficient rubbing. Many of them have a flushing attachment which feeds the water or lubricant between the pads on the work as it is needed.

These short-stroke machines maintain a high speed operation, making from 3,000 to 4,000 motions a minute, with a stroke ranging from 3/16-in. to 5/8-in., and are adaptable to both sanding and rubbing operations. The thick, soft, flexible pads commonly used make it possible to rub curved and uneven surfaces. Where the rubbing is done by wet sanding with wet-or-dry paper, as in rubbing lacquer, a water connection with jets on each side of the machine plays water on the work to prevent the fine abrasive paper from loading.

A relative newcomer to the portable rubbing machine field features the use of a single pad which operates in an elipto-circular or multi-direction movement. It is especially successful in the wet sanding type of rubbing operation.

To obtain best results from the pneumatic or compressed air type of rubbing machine, it should be oiled at least once daily and more if in constant use with a high grade thin oil similar to that used in household sewing machines. The cylinder head which causes the pads to move back and forth is the part most subject to wear and should be kept clean and well oiled to give the maximum service. It is also important that a separator be installed in the air line connection to prevent oil, rust, scale and water from getting into the cylinders.

While more pressure must be exerted with the short-stroke portable rubbing machine than the long-stroke stationary machine, the weight of the motors relieve the operator from having to exert to much pressure. The path of the rubbing operation must also be controlled by the operator as well as the application of the rubbing abrasive and lubricant.

### Selection and Condition of Rubbing Pads Important

Much of the success in rubbing with either the long-stroke or short-stroke machine lies in the condition and selection of the rubbing pads. The pads should always be soft, pliable and free


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| Hard Maple | 4/4 to 8/4 |
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| Birch (Sel. & Btr.) | 4/4, 5/4 |
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| Poplar (Sel. & Btr.) | 4/4 to 12/4 |
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| Cherry | 4/4 |
| Sap Gum | 4/4 to 8/4 |
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| Magnolia | 4/4, 10/4 |
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from all dirt, grit or other abrasive particles which might scratch the rubbed surface. New pads should be well soaked in the rubbing lubricant before the abrasive compound is applied.

Most operators use a shallow container, which contains some of the rubbing lubricant, placed convenient to the rubbing machine in which they place the pads when not in use. In the case of the portable rubbing machine the pan is placed on the work bench and the pads are immersed in the lubricant while still attached to the machine.

Many of the rubbing difficulties encountered in machine rubbing are due to "corns" or small lumps of finish which accumulate on the rubbing pads. While these can be removed by means of a scraper, some operators use a corrugated board (similar to a wash board) on which they rest the pads when not in use. Before starting rubbing, the operator starts the machine while the pads are on this corrugated surface. This action removes the corns that have been formed or have started to form on the pads to prevent them from scratching the rubbed surface.

Where the rubbing operation takes the form of wet sanding, formed rubber-composition cushions are used instead of felt. These are specially formulated to resist the decomposing action of the lubricant and rubbing compound used and have a comparatively long working life. The paper is usually held over their surface by means of spring clips which permit the paper to be changed quickly and easily.

Flexible shaft equipment is also used for rubbing and polishing. They are generally one of three types: machines to be mounted on a bench, to be mounted on a floor pedestal, or to be suspended from the ceiling. The pedestal and overhead suspension types are most popular because they are more adaptable to modern production finishing. The two variations commonly found are the countershaft type, which is especially adapted where different rates of speed are needed; and the direct drive type, which maintains the same speed of the motor and is adapted to continuous production on one class of work requiring that rate of speed.

The countershaft type has a countershaft mounted on top of the motor that is driven from a pulley on the armature shaft. Required speeds are obtained by shifting the belt or by transporting pulleys. The direct drive type, on the other hand, has no pulleys, belts or countershafts. The flexible shaft is directly connected to the armature shaft of the motor which operates usually at 1750 or 3500 r.p.m. The use of right angle heads permits obtaining two speeds on this type of machine.

Proper wheel selection is most important. The wheel should be perfectly balanced, center bored and threaded in such a manner that it will rotate in a true circle when it is attached to the right angle head of the flexible shaft machine. A typical wheel consists of a perfectly balanced metal plate to which is attached a hard rubber disc slightly larger than the plate. For rubbing, a felt disc of the same size as the rubber disc is attached to that disc or a sponge rubber pad covered with a specially made circular cloth is attached to the wheel by means of a draw string in the cloth. This latter arrangement is also used for polishing and sometimes a circular sheepskin cover is used over the felt pad. Where the flexible shaft is used for buffing, a felt base is used for a wheel base. The felt pad is usually attached to the rubber disc with a suitable adhesive and extends beyond the diameter of the rubber disc, sometimes as much as two inches to provide the necessary flexibility at the edge of the wheel.

In the countershaft type of flexible shaft equipment speed ranges of from 875 to 3500 r.p.m. are obtainable and speed controls in the direct drive machines can be obtained to fit individual requirements. The motors usually used to power this type of equipment range from ⅛ to 1 h.p. in standard sizes.

Where flexible shaft equipment is used for rubbing or polishing, required pressure must be applied by the operator but the extreme light-weight of the heads generally keeps fatigue at an absolute minimum and their mobility is a great advantage. The chief objection to the rubbing or polishing job done is the faint rotary marks left on the surface which must be removed by hand if they are objectionable in the type of rubbed finish required.

In the final analysis of all machine rubbing equipment and results, while it is agreed that hand rubbing is still necessary on some parts of every rubbing job, it is a consensus of opinion that machine rubbing will do the major part of the job more efficiently and with less operator fatigue wth a finish equal if not superior to most hand rubbing jobs.

## "Relax Joe!"

### Stalin Sent Simmons Mattress and Kroehler Easy Chair

Nelson Bros., Chicago furniture firm, provided an unusual retail follow-through to a general advertising campaign in an advertisement, June 23, Chicago Tribune, by saluting the Simmons Company for sending Josef Stalin a Beautyrest mattress and announcing that Nelson Bros. was sending Stalin a Kroehler lounge chair, ottoman, and a year's subscription to the Tribune.

The Simmons Company which announced its gift of a Beautyrest mattress in a full page ad published in the Tribune June 20, advised Stalin: "Once you lie on it . . . you'll feel so downright relaxed you won't feel like fighting anybody."

Two days later, Nelson Bros. cabled Stalin: "There's no question about it Marshal—a man can't feel his best unless he's comfortable both night and day. That's why we're sending you a fine Kroehler lounge chair with matching ottoman. We want you to enjoy its deep-cushioned luxury—just a sample of how we live in the U.S.A. By the way, this Kroehler chair and ottoman is priced at Nelson Brothers for only $89. We don't know what that comes to in rubles, Marshal, but forget it. Like America, your Kroehler chair is free.

"P.S. We also are sending you a year's subscription to the Chicago Tribune."

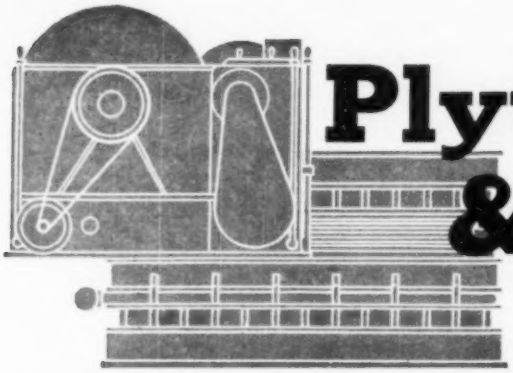
Shown in the Friday advertisement, along with a reproduction of the cablegram, was an illustration of Marshal Stalin seated in the Kroehler chair with a copy of the Chicago Tribune in his hand.

### To Resume Production After Fire

Plans are being made to get production rolling at the T. E. Miller Mill Co., at Brewton, Ala., where fire caused heavy damage to the box manufacturing unit and the veneer mill, and left 215 workers idle last week. John R. Miller, vice president says the box manufacturing unit will resume soon. New machinery has been ordered and will be placed in buildings not damaged. Rebuilding will be done as soon as practical say officials.

### Oct. Safety Council Meeting

The 38th National Safety Congress and Exposition is to be held Oct. 16-20, Chicago, Ill. Sessions on industrial safety, scheduled for Stevens, Congress and Morrison hotels. For further information write R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.



# Plywood & Veneer

FABRICATION
APPLICATION

## VENEER CUTTING AND DRYING PROPERTIES*

### Red Alder

Red alder (*Alnus rubra*) is a small hardwood tree found commonly on the Pacific coast,[1,2] that has been used to a considerable extent in lumber form for the manufacture of medium-grade furniture. It has been made into veneer and plywood only on a very limited scale, probably because the tree rarely reaches a diameter of more than about 16 inches.

The wood of red alder is of uniform texture and its density is approximately the same as that of yellow-poplar. It does not have a pronounced grain pattern. The wood is white when first cut but it ages rapidly to a light reddish-brown color. It is relatively soft, the texture is uniform and close, and the grain is straight.

The species appears to be suitable for cutting into veneer on a limited scale. The wood forms a desirable base material for painting or enameling and could therefore be used as a face veneer on plywood for cabinets and other interior applications. When used as a face ply over softwood veneers it would provide a smooth painting surface relatively free from checking and grain raising for many interior applications. The wood also appears to have the requisite properties for a good crossband veneer for use in fine veneered furniture panels.

Laboratory tests were restricted to cutting and drying veneer from three 4-foot bolts. Pertinent data concerning the bolts are given in table 1.

### Preparation of Logs for Cutting

Because the wood is relatively soft it is possible that good veneer could be cut from unheated bolts. At the Laboratory the bolts were heated in water at a temperature of 140° F. and the wood was found to be in excellent condition for cutting. To get adequate penetration of heat a 12-inch bolt four feet long should be heated at this moderate temperature for about 8 hours and a 16-inch bolt for 15 hours.

Heating alder bolts in steam would very probably result in overheating; veneer cut from such bolts would probably not cut smoothly and might split excessively from heating checks in the bolt ends.

### Recommended Lathe Settings

A thorough study of various lathe settings[3] at the Laboratory was not possible because of the limited amount of material cut. The settings given in table 2 were

*Courtesy Forest Products Laboratory, Forest Service, U. S. Department of Agriculture.

[1]Betts, H. S. Red Alder. American Wood Series. Forest Service, U. S. Department of Agriculture. 1945.
[2]Johnson, H. M., Hanzlick, E. J., and Gibbons, W. H. Red Alder of the Pacific Northwest, Its Utilization, with Notes on Growth and Management. U. S. Department of Agriculture Bulletin No. 1437. 1926.
[3]Fleischer, H. O. Experiments in Rotary Veneer Cutting. Proceedings, Forest Products Research Society. 1949.
[4]Truax, T. R. The Gluing of Wood. U. S. Dept. Agr. Bull. 1500. 1929.

TABLE 1.—*Pertinent data on red alder veneer bolts tested*

| CHARACTERISTIC | BOLT No. 1 | BOLT No. 2 | BOLT No. 3 |
|---|---|---|---|
| Diameter, small end (inches) | 12 | 11½ | 12 |
| Diameter, large end (inches) | 12 | 12 | 14½ |
| Eccentricity of pith (inches) | ½ | ½ | 1 |
| Rings per in., outside | 4 | 4 | 6 |
| Rings per in., near pith | 21 | 17 | 18 |
| Total number of rings | 44 | 44 | 52 |
| Moisture content (percent) | 89 to 105 | 91 to 115 | 71 to 96 |
| Specific gravity | 0.38 to 0.44 | 0.40 to 0.42 | 0.40 to 0.44 |
| External defects | 6 knots | 6 knots, 1 open hole | 16 protrusions covering pin-knot clusters |

TABLE 2.—*Lathe settings used to cut tight smooth veneer of red alder*

| VENEER THICKNESS | KNIFE ANGLE | HORIZONTAL NOSEBAR OPENING | VERTICAL NOSEBAR OPENING |
|---|---|---|---|
| *Inch* | *Degrees-Minutes* | *Inch* | *Inch* |
| 1/32 | 90 — 30 | 0.025 | 0.010 |
| 1/24 | 90 — 20 | .031 | .012 |
| 1/16 | 90 — 10 | .045 | .016 |

used to produce tight, smooth veneer.

### Veneer Drying

The green veneer varied in moisture content from 71 to 105 percent. The veneer was dried in a mechanical roller-conveyor type dryer operating at a temperature of 250°F. In 5 minutes the 1/32- and 1/24-inch veneer dried to a moisture content of 2 to 3 percent, and in this condition it was rather brittle and split readily in handling. The 1/16-inch veneer was dried in 8 minutes to a moisture content of about 5 percent. The veneer dried flat and free of splits except in areas of distorted grain. The tangenital (widthwise) shrinkage during drying, based on the green width, was about 7 percent.

### Other Factors

The veneer cut at the Laboratory contained a considerable number of knots. It is possible that clear material could be obtained by better selection of veneer logs.

The wood can be glued satisfactorily if moderate care is used in the gluing operation.[4] In lumber form the wood has been used extensively for cores in veneered panels.

# LUMBER RESEARCH FINDS BLUE STAIN IS NOT DECAY

**By Dr. A. W. Stout,**

*Chemist*

*Western Pine Association Research Laboratory*

Acceptability of stained lumber has been one of the most controversial issues in Western Pine dealer-manufacturer relationships since logging of the three pine species began.

The dealer has been naturally reluctant to take delivery of soiled stock which appeared to him, and to his customer, to be in the first stages of progressive decay. The manufacturer on the other hand, beset by the unavoidable occurrence of blue and/or brown stain in the manufacturing process, and knowing it was not decay, has not been anxious to mark down his product—perfect in all other respects—when in most cases the stain was to be covered by paint anyway.

The controversy raged about the question "Is stain decay or is it not?" with side issues concerning the paint-holding, nail-holding, split-resistance, dryness, hardness, softness and other properties of the wood, regardless of the alleged decay feature.

Essentially a technical problem, it eventually wound up in the Western Pine Association's Research Laboratory at Portland, Ore., for clarification. Without relating the intermediate mass of scientific test detail that has been reported, here is what we learned about stains in lumber:

First, brown stain—which occurs more widely in Sugar Pine than in Pondorosa or Idaho White Pine—is far less frequently found in the three pines than is blue stain. It occurs both in sapwood and heartwood.

There are two kinds of brown stain, one a chemical process, the other fungus-caused. Approximately 95 per cent is caused by chemical change in the drying process. It is due to the oxidation and or carmelization of certain minor soluble carbohydrate constituents during seasoning, particularly in kiln drying.

It is not, therefore, decay or a rotting process at all but simply a stain like that which an overturned cup of coffee might make on a tablecloth. Not a single use property of the lumber is affected.

The balance of the brown stain, amounting to no more than five per cent, is caused by a nonparasitic fungus that develops occasionally in stored logs. It is similar to the fungus that causes blue stain.

The agents causing blue stain, occurring at certain seasons of the year in all three of the Western Pines, are microscopic plants that grow within the wood, obtaining their nourishment from the soluble materials of the wood cells, but not upon the cellulose or lignin which comprise the woods' structural components. In other words, not upon the cells themselves.

(Decay, on the other hand, is caused by organisms which attack the cellulose or lignin to break down wood's structure.)

Stain fungi, thriving only upon water soluble nutrients, are present only in the sapwood where those materials are available. Stain does not occur in heartwood, nor does it begin in the living tree. It originates only after logs have been sawn, from tiny fungal spores which are almost universally distributed by air currents.

(Decay may exist at any point in the tree or finished lumber, since it destroys cellulose and lignin, and may originate before or after the tree is felled.)

Stain fungus, existing only on water-soluble materials, continues to grow only so long as the lumber is green. It stops growing when the lumber is dried. The color of the stain is not even part of the wood, but only of the fungus itself.

Therefore, like the chemical brown stain, fungus-caused blue and brown stain is in total effect upon the lumber, no different from that coffee-colored mark on the tablecloth. Since the fungi do not live upon the wood's structural elements, stain cannot act upon wood's strength, no matter how deep its penetration nor how broadly it covers the piece. And, since it does not affect wood's structure, it cannot influence its paint-gripping qualities, nor any of its other use values such as nail-holding ability, resistance to splitting, texture, etc.

Put another way, stain fungi might be likened to the small fish which accommodates the whale by swimming into its mouth to extract bits of superfluous food

from the monster's teeth, but harming neither the whale nor the molars. The fungi feed upon water-soluble nutrients which nourished the living tree but which are of no value to the manufactured lumber.

It can only follow, then, that stained lumber is sound lumber, suitable for any of the many purposes to which stain-free stock is put. Moreover, stained lumber can be merchandised by the alert dealer because it's enchantingly different.

The delicate blue shading scattered at random over the face of the board provides a pleasing informal pattern that cannot be duplicated. Known as marble grain paneling, it commands premium prices from discerning home builders by merchandising-minded retailers.

A condensed report of Research Laboratory findings on blue and brown stain, attractively printed in three colors, is available from Western Pine Association, 510 Yeon Building, Portland 4, Ore.

### Miracle

A young man and a young lady were the proud parents of a newly born daughter weighing less than four pounds. Some of their friends were teasing them about their tiny baby, and the young girl finally replied. "Well, what in the world do you expect? We've only been married four months."

### Monkeying Around

A clergyman at a dinner had listened to a talkative young man who had much to say on Darwin and his "Origin of the Species."

"I can't see," he argued, "what difference it would make to me if grandfather was an ape."

"No," commented the clergyman, "I can't see that it would. But it must have made a great difference to your grandmother."

---

A tourist, pointing to a decorated skull in a showcase: "Do you know whose skull it was?"

Tired Mexican Guide: "That is the skull of the Emperor, Montezuma."

Tourist: "Who was that," pointing to a smaller skull in the same showcase.

Guide: "That Madam, is the skull of Montezuma when he was a little boy," he replied with a straight face.

### Fire Destroys Large Stock of Finished Lumber

Niagara, Falls, Ont.—Fire broke out in the Harriman Lumber Company yards here June 27 and a large quantity of finished lumber was destroyed before firemen brought the blaze under control. No estimate of damage was available.

### Query Wood Products Firms On Shipping Practice

Little Rock, Ark.—The executives of Arkansas' principal railroads and the Industrial Committee of the Arkansas Wood Products Association have agreed to send out freight rate questionnaires to the entire wood products industry, in Arkansas.

Osro Cobb, executive secretary of the association, stated that these questionnaires will be mailed to about 1,000 Arkansas industrialists to determine the general trend of shipments and to obtain information on rail and motor tonnage shipped for the year 1947-1949.

---

Betty: "I thought you were going to the Jones' cocktail party? What are you eating that big meal for?"

Benny: "Just laying a basement under the bourbon, sis. It's safer that way."


**SAVE SANDING COSTS!**

**How Production-Wise Manufacturers Save Time and Money with AP JEWEL ABRASIVES**

**BEATS PAR**

This prominent manufacturer of sporting goods had a problem finishing golf clubs. Tricky combination of wood and metal sent finishing costs sky-high. Finally switched to heat-resisting AP Bondite New Process Belts—says they outperform all other abrasives tried.

**FINER FINISH**

Much of the beauty of maple furniture depends on quality of finish. This manufacturer, dissatisfied with results, found AP Jewel Garnet Endless Belts did faster work than previous abrasives — gave finer finish at same time.

**8 TIMES LONGER WEAR**

Torn covers on drum sanders were causing costly slowdowns finishing plywood sheets for this boat manufacturer. AP representative recommended change to AP Bondex Garnet Fibre. Manufacturer now reports, "These AP drum covers last 7-8 times as long as former abrasives".

Facts like these from manufacturer after manufacturer tell a story you can't afford to ignore. Find out what Jewel Abrasives can do for you now! See your distributor or write us today.

**Abrasive Products, Inc.**

SOUTH BRAINTREE 85, MASSACHUSETTS • MAKERS OF JEWEL COATED ABRASIVES

## White Fir

*(Continued from page 16)*

toy parts, crating, sheds and small enclosures, sign boards, etc. Among the railroads, it is utilized for cable boxes, coal doors, gates, grain doors, small buildings, fencing and ties.

About the farm, the utility value of White Fir makes it ideal for the many miscellaneous uses such as cribbing, troughs, feeders, pens, grain chutes, seed bed boards, stall partitions, and enclosures of all description both small and large.

White Fir is classified in Group I of four classifications by the Forest Products Laboratory in suitability for box shook use. The rating is reflected in its expanding popularity, for today more than 20 per cent of the White Fir production goes into shook.

Why, then, if White Fir can handle so many jobs, hasn't it been used in volume before? The answer is that lack of recognition of the wood's value resulted in improper manufacturing care, which in turn had made customer acceptance difficult or impossible. But the tight supply situation of post-war years forced better processing, consequent utilization and realization that here was a wood for all-around use permitting marked economies wherever it was put to service.

The general result will continue to be better construction at reduced costs, and greater utilization of forest resources.

### Introduce New Plywood "Venetian Blind"

St. Louis, Mo.—A plywood "venetian blind" has been introduced by the Douglas Fir Plywood Association.

It is one of six plans for plywood screens, windbreaks and fences now being made available by the association through local plywood distributors and dealers.

The king-size "venetian blind" consists of vertical Exterior plywood panels. The panels, four feet by eight feet in average installations, are pivoted at top and bottom to swing to any desired position. As an outer wall of porch or room, such a screen is said to permit varying light, shade or privacy. It can be closed entirely to form a solid wall or screen.

In addition to having rugged strength made possible by its unique criss-cross construction, Exterior plywood is completely unaffected by weather or water because of waterproof adhesives used to bond the plys. Monsanto Chemical Company here, one of the nation's foremost suppliers of plywood glues, explains that such adhesives are really very thin sheets of plastic hardened under heat and pressure.

**FULL SIZE PATTERNS**

***of***

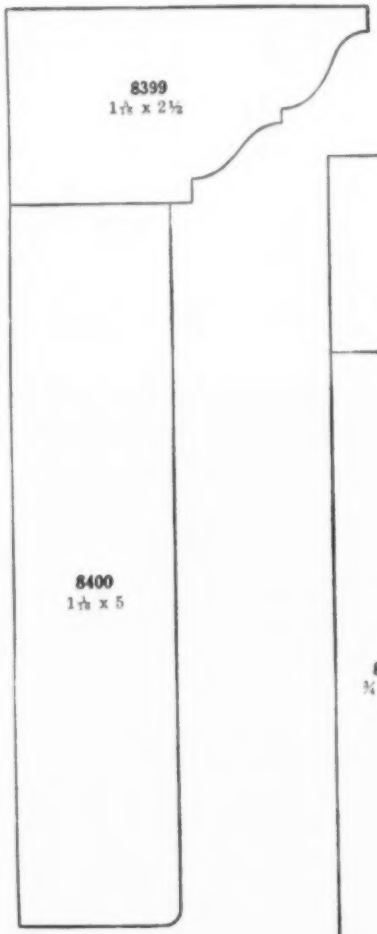
**WOOD MOULDINGS**

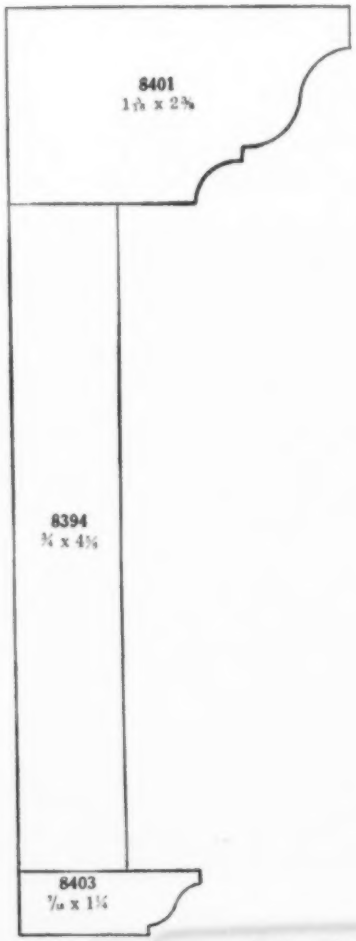
**No. 11**

*(See opposite page)*

On the opposite page are shown a number of standard moulding patterns that are in wide use. It will be noted that they are printed in the exact sizes given on each pattern. This is done for the purpose of facilitating the ordering of mouldings, for the use of the knife grinding department and for those firms who may want to order ground knives or milled to pattern cutter heads from one of the several firms specializing in that type of work.

## CAP TRIM

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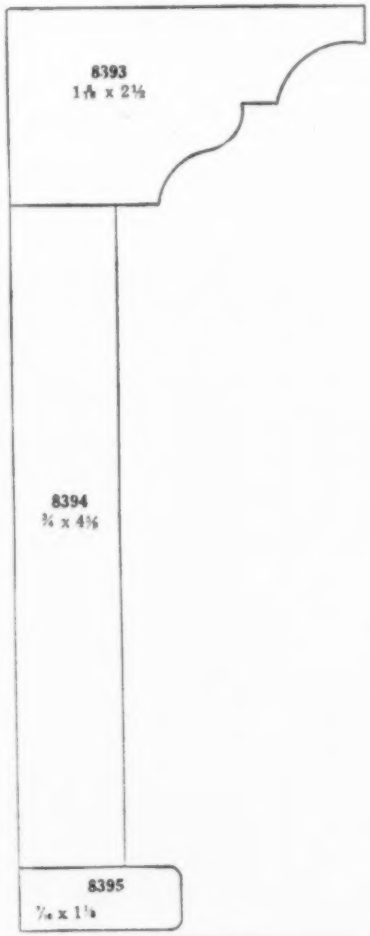


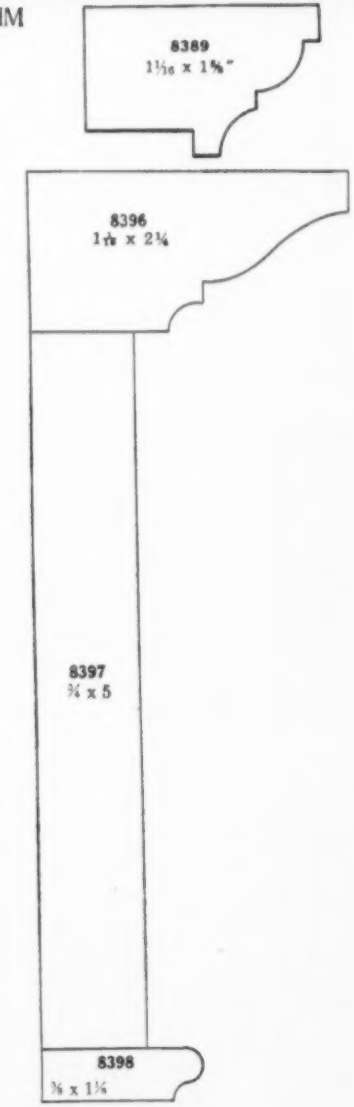


**These actual size profiles will aid you in knife grinding or in ordering knives and cutter heads or mouldings.**

## New York News

*By Staff Correspondent*

### Buy Carthage Wood Pdts.

Carthage, N. Y.—In open court room bidding George L. Fleming, Champion, and his son, Merlin D. Fleming, 3 North Broad Street, purchased the plant of the Carthage Wood Products Company.

The two reportedly will operate their lumber business in the plant, manufacture sashes and doors.

Their business now is being conducted at Champion Huddle but within a month they expect to be in the new location.

* * *

### Jamestown Table Co. Expands Salamanca Plant

Jamestown, N. Y.—A more than $100,000 expansion program to increase the production facilities of the Salamanca plant of the Jamestown Table Company, was announced by Ralph W. Taylor, company president.

The new construction work at the plant, which presently employs about 200 persons, is expected to be completed within 60 to 90 days and will increase its current capacity by more than 25 percent.

Mr. Taylor said this program together with other plans for the future will make the Salamanca plant one of the "most modern and up-to-date furniture plants in the industry and will also provide for an increase in employment."

The Jamestown Table Company, in addition to its Salamanca plant, operates a factory in Jamestown. At both plants, bed room, dining room furniture and kneehole desks are manufactured and distributed throughout the nation. The company is also engaged in government contract work.

A new dry kiln building is being constructed which will provide for three dry kilns with a total capacity for 100,000 feet of lumber per week. Mr. Taylor said the kilns will permit either cross-piling or end-piling of lumber for drying.

Adjoining the dry kiln building a dry storage shed is being built where 100,000 feet of kiln-dried lumber can be stored.

Mr. Taylor said the plant's rough machine department is completely equipped with a conveyor system and new installations, making possible a continuous flow of lumber in this department without the necessity of stoppage between operations.

Mr. Taylor added that a machine, which makes the gluing process of core stock, drawer slides and panel stock practically an automatic operation, is also being installed. This, he said, will supplant the present method of the gluing operation, which requires carrier clamps.

## Pennsylvania News

*By Staff Correspondent*

North Girard, Pa.—A $75,000 blaze completely destroyed the Belmar Manufacturing Co., in North Girard.

The fire, believed to have started either in the boiler room or the dry kiln, practically levelled the plant, which was one of the nation's largest manufacturers of wooden coat hangers.

The three-story wood structure known throughout the country as the "Empire," burned rapidly as a strong south wind fanned the flames.

Fed by wood dust and shavings, the blaze destroyed a large stock of hangers, as well as machinery and a stock of seasoned timber in the building. The stockpiles of wood outside the structure were saved, firemen said.

### Forest Furn. to Open

Warren, Pa.—Production will begin at the New Forest Furniture Co. of Sheffield by the end of August or early September.

Albert and Emil Ristau announced they chose the name of the company because it is located in the heart of the Allegheny National Forest at Sheffield.

It was purchased recently from the Reconstruction Finance Corporation and was formerly the Para Equipment Co. and the Central Pennsylvania Lumber Co.

## Southern Plant News

*By Staff Correspondent*

Perry, Fla.—The sawmill of the Lee Tidewater Cypress Company, said to be the largest cypress sawmill in the world, was badly damaged by fire June 3, 1950. Damage was estimated at $500,000.

* * *

S. R. Hungerford, Inc., Memphis (Tenn.), is erecting a new 90,000 sq. ft. building in that city for production of bed room furniture. Construction of the brick, concrete and steel building is being supervised by Chandler & Chandler. Hungerford is a nationally-known manufacturer of solid mahogany furniture.

* * *

Warren, Ark.—The following were elected to head the Bradley Lumber Company of Arkansas at a recent meeting of the directors: S. Baker Fullerton, president, succeeding the late R. W. Fullerton; Joe L. Reaves, vice-president; O. Hilton, vice-president; H. S. Davis, secretary; E. F. Paulus Sr., treasurer; Vernon E. Brooks, assistant secretary; and Charles E. Eberle, a director.

* * *

Washington County will soon have another veneer mill to process pine and hardwood logs. The new firm seeking a charter will be named Sandersville (Ga.) Veneer Company and be owned by four North Carolinians. Proprietors will be Mr. and Mrs. Earl D. Smith High Point, N. C., and Mr. and Mrs. Clyde Sechrest, of Thomasville, N. C.

The company will employ about 30 people and the plant be located between Sandersville and Tenille. The firm will specialize in veneer stock as well as a finished veneer containers for Georgia and Florida fruit and vegetable shippers. Present plans call for the new plant to be in production during July.

* * *

"Work has begun on a $150,000 curing plant for the Southern Pine Products Company to be located at Statesboro (Ga.). When completed the concern will employ more than 100 persons. An Augusta corporation, the concern will place 15 portable sawmills throughout that section of Georgia and these small plants will feed the planer at Statesboro. After processing in the Statesboro plant, the lumber will be shipped to other plants for further processing."

* * *

Nashville, Tenn.—The secretary of state has issued a charter to Athens Wood Products, Inc., Athens, Tenn., to manufacture and deal in wood products, furniture, toys, etc. The incorporators are Lowell F. Arterburn, Helen Arterburn, Charles C. Redfern and Jane A. Redfern.

* * *

West Plains, Mo.—The Cloud Oak Flooring Co. plant here was burned June 22. Fire began in a cooling shed used to store lumber after it has been through the kiln. It's probable origin was a carelessly thrown away cigarette.

J. V. Cloud, Jr., manager of the plant estimates the loss at $200,000 which is partially covered by insurance.

* * *

Memphis, Tenn.—P. McLauren Watson has been named sales manager of Memphis Sash and Door Co.

He has been city sales representative for the wholesale millwork firm for the past two years. Mr. Watson previously was assistant personnel director, for Mississippi Products Inc., a large postwar woodworking plant in Jackson, Miss.

## West Coast News

*By Staff Correspondent*

Norman Jacobson formerly associated with Columbia Veneer Company at Kalama, Wash. announces plans for a cooperative plywood mill at Astoria, Ore. Some 200 memberships will be sold to those who will be associated in the new plant. Each will put in $5,000.

* * *

Lebanon, Ore.—Two woodworking projects have been shipped from Lebanon high school of Industrial Art Awards in Chicago for national consideration. One was a 10" square lamp with alder center and 8-in. square walnut and sugar maple veneer squares on the outside. The squares were inlaid with a palm leaf design.

The second entry was a mint bowl with inlaid work showing a Mexican scene. It was built of myrtle, white maple and walnut in the designing.

* * *

Willima, Ore.—Willimina Lumber Company was destroyed Jun. 24th, with a loss of $300,000.

* * *

Silverton, Ore.—Ray R. Tull prominent Oregon and California lumberman died following heart attack. His home is in Redding, Cal. He repre-

sented the West Coast Bureau of Lumber grades.

* * *

Seattle, Wash.—Lumber prices have skyrocketed and stocks have become so depleted during the past two months that "the situation is more intense than following the war" advises William C. Bell, manager of Western Retail Lumberman's Association.

* * *

Portland.—Lawrence (Larry) Price of Seattle has been appointed manager of production control of Timber Structures. Price will be succeeded at Seattle by John J. Kossler of Portland estimating engineer.

* * *

Seattle.—The Pacific Northwest's booming plywood industry may look forward to a relatively high demand over the next 12 months. This is the opinion of Charles F. Roos, New York economist.

Roos told the Douglas Fir Plywood Association at Tacoma, to broaden sales promotion plans for their product which is now at an all-time sales high.

Frost Snyder was reelected as association President and also gave the leading address "The Future Belongs to Those who Promote it."

Other officers named Victor Olson, president Washington Veneer Company, vice president; Chas. M. Ducey treasurer and general manager Menasha Plywood Corpn., secretary and J. P. Simpson, vice president and general manager Buffelen Mfg. Co., treasurer.

## Michigan News

*By Staff Correspondent*

### Delta Furniture Moves

Escanaba, Mich.—The Delta Furniture manufacturing company has moved into its new quarters on Stephenson avenue here and the space formerly occupied by the Delta Furniture manufacturing company has been taken over by the Harnischfeger welding plant.

New quarters were constructed on the south end of the city-owned former Steele Wallace factory to house the Delta Furniture Mfg. Co., and to make room for the Harnischfeger expansion program.

* * *

### Fire Destroys Big Sawmill

L'Anse, Mich.—Fire of undetermined origin destroyed the sawmill of William Ruona here on May 15. Workmen barely had time to get out of the building to escape the sheet of flame which shot from one end of the 200-foot structure to the other. In 20 minutes the mill was in ashes.

The mill and equipment are a total loss. But piles of lumber in the yards, and trucks and other equipment were saved.

* * *

### Atlas Plywood Expands

The Atlas Plywood Corporation with three manufacturing plants in Michigan's Upper Peninsula, besides plants in other sections of the country, is steadily expanding since its plants has changed over to manufacture of plywood for use in the manufacture of furniture, cabinets, etc. The company indicates a very optimistic outlook for the future.

* * *

### Bergsma Bros. Launch Plant Expansion Program

Julius and Kenneth Bergsma, partners in Bergsma Bros. furniture-making firm of Grand Rapids, Mich., announced June 19 their intention to begin an expansion program which will double present plant space and cost $75,000. Five new offices and more production space will be included in the new two-story structure, to be 21,000 square feet; this will increase the total square footage to 37,000.

Thirty more workers will be added to the present 80 when the expansion program is completed in late November. The new building will measure 60x175, and the firm will continue with its manufacture of goods "out of the ordinary line." Cabinet manufacturing and special furniture parts are now being handled by the firm, also.

The Bergsma brothers started their careers in the basement of their home in Denver, Colo., in 1935, while in high school. Kenneth now handles the production problems at the plant while Julius takes care of administrative duties.

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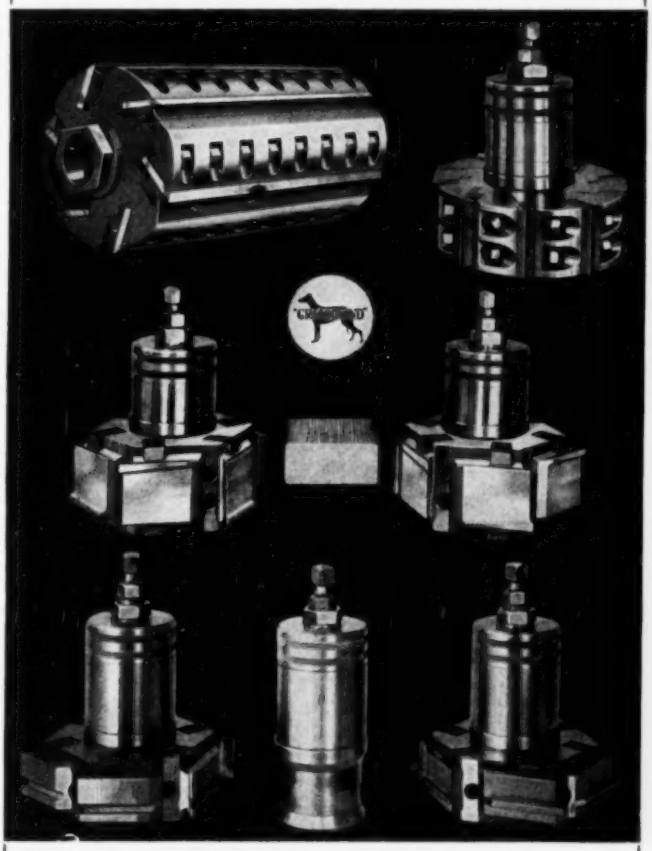
**CUTTER HEADS - - - For Every Possible Requirement**



**Jones & Orth Cutter Head Co.**

SEATTLE, 14, WASHINGTON MEMPHIS, 3, TENN.

### Wood Products Firm's Back Teco Study Kit Idea

Washington—Over 600 of the new wood study kits, recently announced by the Timber Engineering Company laboratory, have been sold in the past six weeks, according to Robert Holcombe, technician in charge of this laboratory project.

Half of the orders have come from lumber, furniture and woodworking companies. Many firms are giving kits to local Scout organizations and 4-H clubs.

In the educational field colleges, high school and trade schools are active. Architects, trade associations, and research institutions, including various government and defense agencies are making use of this practical and easy method of wood identification.

Neatly packed in a wood box, the kit contains 54 specimens of commercial species and wood products used in the United States. To make identification and general knowledge of wood both entertaining and instructive, a Teco 10-power hand lens, knife and 84 page illustrated book complete the kit. Price $8.50 delivered.

### Porter Machinery Co. Issues New Cutter Catalog

The Cutter Division of the C. O. Porter Machinery Company has announced the publication of a new complete Cutter Catalog for the Woodworking Trade. The catalog, prepared by the Jaqua Advertising Agency, attractively presents to the trade the complete line of Porter Woodworking Cutters. Interior views of the new Porter Cutter Plant also show the modern, up-to-date machinery and other increased facilities for producing cutters of all types.

The contents of the catalog include illustrations and complete specifications on the entire line of Porter Router Bits, Router Cutters, Shaped Plowing Cutters, Routing and Shaping Cutters, Special Router Cutters, Flat Knife

Blanks, Carving Cutters, Shaper Cutters and Shaper Knives.

A feature of the catalog is the "How to Order" information which is broken down specifically for each group of cutters. This simplifies cutter ordering and avoids possible errors or misunderstanding in regards to cutter specifications. Each section gives the customer the exact information he should have for ordering a particular Porter cutter.

The Catalog and separate Price List will be mailed upon request free of charge. Please write the C. O. Porter Machinery Company, 666 Front Ave. N. W., Grand Rapids, Michigan.

### Saw Firm Opens New Portland Branch

A new sales and service branch of the DeLuxe Saw & Tool Co., of Chicago, largest manufacturer of carbide tipped saws, was recently opened at 912 S. E. Hawthorne in Portland, Oregon, to serve the Pacific Coast forest products industries. President of the company, C. Goodman, was on hand to open the new branch which will be managed by J. L. Burnette, recently transferred from the sales department of the company's High Point, North Carolina, branch.

Manufacturers of Karbide King cut-off, rip and trim saws, groovers, sticker and shaper knives, the company guarantees its products against failure under normal operations. The Portland office will service, repair and sharpen carbide tipped saws of any make.

### Plastic Laminators Co. Organized

"Construction work on Toccoa's (Ga.) newest industry has recently begun, according to reports from that city. This firm to be known as Plastic Laminators Co., will employ 250 men and have an annual payroll of $400,000. The concern will manufacture wood veneer and plastic products which will be supplied to furniture manufacturers all over the U. S. The new industry is an affiliate of one of the largest industries of its kind, located at Hampton, South Carolina," according to the *Georgia Newsletter*, May 22, 1950.

### "West Coast Terms No. 4" Now Available

"West Coast Terms No. 4," a new publication of the West Coast Lumbermen's Association which contains information on estimated shipping weights and West Coast conditions of quotation and sale, is now available, according to H. V. Simpson, Association executive vice president.

"West Coast Terms No. 4" is an up-to-date restoration of a WCLA lumber trade service publication that was widely used and valued in pre-war years for its detailed facts on West Coast lumber supply, sales, shipping and settlement procedures.

Copies of the 16-page booklet may be obtained without charge by writing West Coast Lumbermen's Association, 1410 S. W. Morrison St., Portland 5, Oregon.

### THERE'S ONE IN EVERY COMPANY... By Bob Dixon

### New Infeed Attachment Bulletin

Ekstrom, Carlson & Co. announce a new, two color, informative circular regarding their revolutionary feeding attachments for shapers, jointers, variety and band saws. Profusely illustrated, it fully describes five different models and contains much valuable information concerning the type of work which can be economically produced with those units. Write today for your copy, specifying Bulletin No. A100.

### Paul Garner Acquires Alexander Mfg. Stock

Picayune, Miss.—W. A. Alexander has sold his stock in the Alexander Manufacturing Company, Inc., to Paul Garner, H. C. Hill and E. R. Hodgson Jr. The firm manufactures skis, patio and lawn furniture in its wood working department. Mr. Garner was named president of the company after sale of the stock was completed, and Mr. Hill was named vice-president, and Mr. Hodgson, vice-president and secretary.

# Out in the shop

## Boring Circular Stock

Cases arise from time to time in which it becomes necessary to bore a number of spaced holes along the same circular line on a piece of circular stock. Many times these holes are equally spaced, though there are times when unequal spacing is necessary. The method shown here is one that may be used in connection with either equal or unequal spacing, though it is seen in use for boring equally-spaced and equal-sized holes. By this method, such work may be done on a single vertical spindle machine, which is sometimes necessary.

A represents a single spindle boring machine table of wood, which has been laid over and attached to the standard boring machine table. Use of a false wood table on top allows holes such as E and G to be bored in selected positions, as necessary, for this particular type of setup. B is a special circular fence that has been applied to this false table A. In the case shown, the holes (as D and F) to be bored in the workpiece are in the center of its width. The fence B must therefore be so set on the table A in relationship to the position of the boring bit that the holes will be so bored.

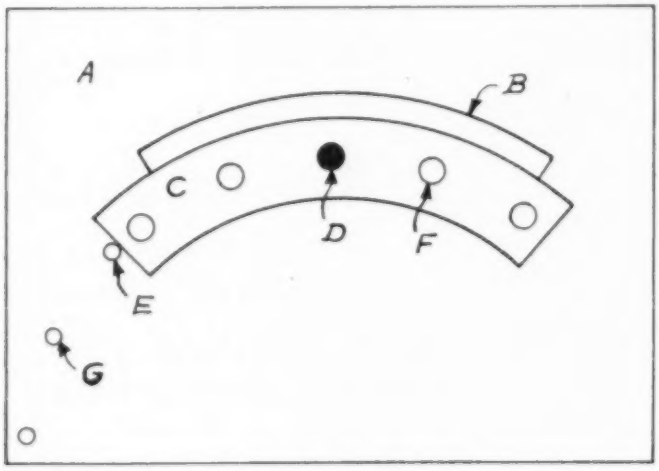
### How To Set the Fence

To set the fence properly in this regard, simply strike a circular line in the center of one of the workpieces, or measure off a central-width point and mark it, if you prefer, at about the center-length of the workpiece. With the boring bit mounted in the boring machine chuck, while the machine is at rest, hold the marked workpiece on the machine table and bring the boring bit down with the actuating pedal, moving the workpiece on the table meanwhile so the point of the bit will engage the mark precisely. Tread on the pedal strongly enough that the point of the non-revolving bit will hold the workpiece firmly to the boring machine table. Holding this arrangement by holding the pedal down firmly, move the fence B gently up to the back or convex edge of the work, and attach it firmly to the table A at that point.

The inner or concave edge of the fence B must have a radius identical with that of the convex edges of the workpieces, so the workpiece C may be slid around within the fence, boring hole after hole, all of the holes so bored automatically being made in the centerwidth of the piece. The fully-shaded hole D represents the actual position of the boring bit.

The holes E, G, etc., bored in the table A, are pre-bored on such a spacing layout as to provide for proper spacing of the holes in the workpiece. In operation, a wood dowel is placed in one of these holes in the table, and the lefthand end of the workpiece is run up against the dowel while a hole is being bored in the workpiece. Then the dowel stop is removed and is placed in the next table hole. The workpiece is then run up against the dowel again, and another hole is bored.

Thus, the workpiece is seen with its end tangent to the hole E, where it is assumed to be bearing against such a

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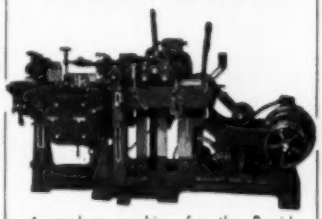
**ANDERSON-TULLY COMPANY**

MEMPHIS 10, TENN.

**HERMANCE NO. 60 HIGHSPEED BALL BEARING MOULDER**



A modern machine for the Rapid and Accurate production of Small Mouldings or for four side planing. Ideal for detail work. Quick to set up. High spindle speed, 5400 RPM, means fine one-knife finish at fast feeds. Handles stock from the smallest to 6" wide and 3" thick; bed drops 16" for running wide stock on edge. For fast feeds it can be furnished with four knife heads, knife jointers, electric grinder and automatic hopper feed. The low initial cost and many advantages of this machine will appeal to you.

Write for Detailed Bulletin

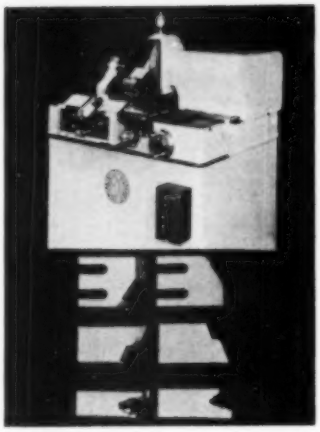
**HERMANCE**
MACHINE COMPANY
Williamsport, Pa.

stop. From this, you will understand that the hole at D is being bored while the end of the workpiece is bearing against the dowel at E, and that there are two additional holes such as E and G which are beneath the workpiece C, and which were previously used for boring the two holes toward the left-hand end of the workpiece. In other words, there are five holes such as E and G in the false table A, which are used for boring the five holes such as D and F in the workpiece.

You will readily understand that a circular line must be struck on the table A upon which will be spaced points where stop holes such as E and G will be bored. While the holes are bored with equal spacing on that line in the setup shown, this need not be the case. If unequal spacing is required between holes in the workpieces, then corresponding inequalities must and will be incorporated in the spacing of the table holes.

## New Profile Knife Grinding Attachment

A new profile knife grinding attachment for use with the Redco precision grinder has been developed by the Redco Tool Division of the Red Lion Cabinet Company. This profiler enables any woodworking plant to both make and sharpen high speed steel or cemented carbide profile knives for shapers, moulders, automatic lathes and other similar operations right in its own shop.



The profile grinder practically eliminates the element of human skill previously required to make and maintain precision knives capable of producing uniform results. Profile knives, whether one or one hundred, are made uniform to within a .001" tolerance in a fraction of the time required to do the work by hand, it is claimed.

Using a thin template made to the contour of the finished piece of moulding, the Redco profiler will make any number of precision knives. Built into the machine is a means of compensating for the cutting angle in order to produce a knife which will give the required contour to the finished piece of moulding.

The low cost Redco profiler is the answer to what has been a major problem in the woodworking industry. With the Redco profiler you can make and resharpen profile cutters quickly and more accurately at a cost saving that will, in a short time, pay for the unit. For additional information, write to Redco Tool Division, Red Lion Cabinet Company, Red Lion 6, Penna.

## Atlas Plywood Corp. Leases Plant

The Atlas Plywood Corporation of Boston has recently announced that it has leased the Tidewater Plywood Company plant at Brunswick (Ga.) Reports from Brunswick reveal that the local plant will produce gum plywood panels for doors and employ around 200 persons locally. William Kornegy, now at the Goldsboro, North Carolina, Atlas plant will become the new manager at the Brunswick plant. Operations are scheduled to begin at an early date, according to the *Georgia Newsletter*, May 22, 1950.

Susie: "You mustn't be discouraged. In this world there's a man for every girl and a girl for every man. You can't improve on an arrangement like that."

Mazie: "I don't want to improve on it. I just want to get in on it."

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THICKNESS: 1/8" to 1 1/16".

CONSTRUCTION: Rotary or Lumber Core.

SIZES: Standard up to 96" long x 48" wide. Dimension sizes in many cases.

SPECIES: Birch, Gum, Maple, Mahogany, Oak, Prima Vera, Walnut, and others.

CUPBOARD DOORS: With Poplar lumber cores, banded two sides.

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ALSO

Good 2 Sides

1/4"

DOOR PANELS

*PROMPT SHIPMENT*

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# MARKETS ★ FINANCIAL NEWS ★ PRICES

## Furniture Production May Set All Time High

The upsurge in the furniture industry is still under strong momentum.

Furniture output in the United States in the second quarter of 1950 promises to reach a higher total than that attained in the first quarter of 1948, which in turn was an all-time postwar high. Furthermore, with order books as full as they are and with the other forces now operative, the industry should push to even higher levels during the third quarter than it has thus far experienced this year. This means that the second six months of 1950 should compare favorably with the first six, and that total furniture production in 1950—when we are through with it—should not only exceed 1949 but that of peak 1948 as well.

Seasonally, May is not a high order month for the furniture industry, since it precedes the mid-summer markets. 1950 was an exception. Orders went up rather than down. The May increase averaged 24% over April. As compared with May 1949 bookings were up 54%, by far the largest year-to-year gain recorded thus far in 1950. This unusual increase brought total orders for the first five months of 1950 up 35% above the comparative total for 1949.

For the first time since 1944, May shipments were greater than April shipments. The increase was 5% which compares with a decrease of 6% in May 1949. May 1950 shipments were up 48% over those of May 1949, and for the five months ended May 31, the industry's shipping volume was 22% ahead of 1949. —Seidman & Seidman.

### Willett Votes 100 Per Cent Stock Dividend

Louisville, Ky.—A 100 per cent stock dividend, in addition to a regular quarterly 20-cents-a-share dividend, was declared yesterday by directors of Consider H. Willett, Inc., furniture manufacturers.

Henry W. Wales, president, told stockholders that earnings in 1949, Willett's "best year," totaled $276,713, equal to $2.91 a share.

### Wage Raise Allowed by Atlas Plywood Corp.

Rhinelander, Wis.—A wage boost of five cents an hour has been granted in a new contract at Atlas Plywood Corp. Clyde Russ, president of Local 261, International Woodworkers of America (CIO), said a new contract with the company provided also increased vacation allowances, full union shops and checkoff system for dues. Russ said similar agreements had been reached with unions at plants of the Corporation in Newberry and Munising, Mich.

### Report of Lumber Movement

Lumber shipments of 425 mills reporting to the National Lumber Trade Barometer were 2.6 percent below production for the week ending June 24, 1950. In the same week new orders of these mills were 1.7 percent above production. Unfilled orders of the reporting mills amounted to 59 percent of stocks. For reporting softwood mills, unfilled orders were equivalent to 27 days' production at the current rate, and gross stocks were equivalent to 43 days' production.

For the year-to-date, shipments of reporting identical mills were 12.1 percent above production; orders were 16.8 percent above production.

Compared to the average corresponding week of 1935-1939, production of reporting mills was 63.4 percent above; shipments were 68.7 percent above; orders were 76.2 percent above. Compared to the corresponding week in 1949, production of reporting mills was 6.0 percent above; shipments were 9.4 percent above; and new orders were 12.3 percent above.

### Wages Increased for Woodworkers

Rhinelander, Wis.—A new contract calling for a 5c an hour wage increase was announced by the union at the Atlas Plywood Corp. here. The union, local 261 of the International Woodworkers of America (CIO), had sought a 10c an hour boost.

Clyde Russ, president of the local, said unions at Atlas plants at Newberry and Munising, Mich., had reached similar agreements.

The agreement, he said, called for increased vacation allowances, a full union shop and installation of the check-off system for collection of union dues.

Russ said the local had voted 84 to 74 to accept the company's offer. The local has 180 members. The contract will benefit 250 employes at the plant here.

### Munising Wood Products Strike In Fourth Week

Marquette, Mich., June 22.—In the Marquette and Munising plants of the Munising Wood Products company, workers continued their strike after failure of negotiations between company and union officials. In the wage dispute neither side yielded positions during a meeting conducted June 21 by U. S. Conciliator John H. Behymer, Washington, D. C., and State Mediator Paul Ricketts, Lansing. The walkout began June 5.

The strike was ordered after the company refused a 10-cent an hour wage increase plus a five cents an hour night differential for the second and third shift. Clark said other terms of the contract were not in dispute.

### $500,000 Flooring Plant To Open in Carolina

Summerville, S. C.—A $500,000 hardwood flooring plant will open near here soon, Chamber of Commerce officials announced. The new plant will be operated as the Carolina Hardwood Flooring Manufacturing Co., headed by Clarence E. Hood, Jr. and Clark Pierce, of Meridian, Miss., and Howard Dobson, of McClellanville, Chamber officials said.

### Mengel Company to Pay Second 15-Cent Dividend

Louisville, Ky.—The second 15-cent dividend of the year on common stock of the Mengel Company was declared June 16 from the company's second quarter earnings. The first quarter dividend resumed payments after a lapse since a 25-cent dividend in April, 1949. The second quarter dividend is payable June 20 to stockholders of record June 27.

### Widdicomb Co. Buys Wm. Berkey Furniture Co.

John Widdicomb Co., of Grand Rapids, Mich., purchased the William A. Berkey Furniture Co. of that city for approximately $300,000, it was announced June 7, thus linking the names of two famous makers of traditional furniture. The John Widdicomb Co. was started in 1897 and features production of fruitwood and painted French Provincial furniture. The Berkey concern is one of the outstanding producers of eighteenth century furniture.

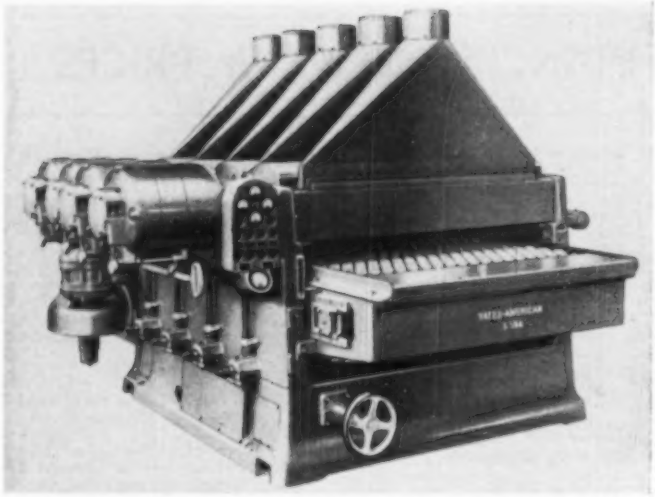
The newly-acquired plant has four floors, measures about 80,000 square feet and employs about 75 persons, according to John L. Stuart, president and general manager of the Wilddicomb firm. The latter concern employs about 400 workers.

The Berkey company will be a division of John Widdicomb and both concerns will be managed by Stuart.

### Michigan Firm Buys California Plant

Zeeland, Mich.—Herman Miller Furniture manufacturing Co., of Zeeland, Mich., has purchased a woodworking plant in Venice, Calif., expanding the company's total output by 30 per cent, D. J. DePree, president of the firm, announced recently.

The company formerly had some of its component furniture parts made in California and now will operate the newly-acquired concern as its west coast plant. DePree said the plant would concentrate on production of a new storage group designed by Charles Eames. The new section would be in the low-cost furniture group, DePree said. The firm makes modern furniture.



The S-334, the 4 drum model, in the new line of Yates-American Endless Bed Sanders.

## New Line of Endless Bed Sanders

A complete line of newly designed endless bed sanders has been announced by the Yates-American Machine Company of Beloit, Wisconsin. Illustrated here is the S-334 Four Drum Sander. The S-333, a three drum machine and the S-332, a two drum machine are also offered.

The manufacturers call special attention to the variable speed feed drive which is furnished as regular equipment. This variable speed drive makes available an infinite range of feed speeds from 12 to 36 feet per minute, and permits the selection of the exact speed needed for the work at hand.

Another important feature, exclusive on these machines, is the continuous lubrication which is provided for the chain links of the endless bed. This oiling system is positive in operation, assures smooth bed travel and prolongs the life of the chain links and pins.

The drum shafts are heavy and have short extensions. This prevents whip and overcomes any tendency for long drums to spring under load. Extremely accurate adjustment of the drum is obtained by the use of tapered wedge blocks which overcome the maladjustment inherent in machines of conventional design due to the wear between the hoisting screw and nut. Separate motors are provided for the oscillator drive, feed and hoist.

All three machines are available in a number of sizes ranging from 31" wide and up.

## Squires Mfg. Co. Expanding Dim. Stock Production

Milan, Mich.—Opening of a jobbing department to serve other manufacturers with made-to-specification wood parts, specialties and containers has been announced by Arleigh N. Squires, president of the Squires Manufacturing Company, Milan, Mich.

The Squires company has operated a general woodworking plant in Milan since 1925 and has established lines of rustic furniture and plywood boats and boat kits, both of which have been recently expanded and are being distributed through Squires dealers in all parts of the country.

The new jobbing department will make available the equipment used in fabricating these products as well as other woodworking facilities for the manufacture and assembly of a wide range of wood parts used in industry. Ripping, sticking, boring, hand fabrication and other equipment is available, Mr. Squires said, and the company's experience in engineering and wood products development will be combined with established sources of supply for native hardwoods, Canadian spruce and other woods in the jobbing service.

Under the direct supervision of Mr. Squires, the new department also is available for consultation on wood fabrication problems. A number of manufacturers already are using the service, it is reported.

## Carbide Saw and Tool Co. Expands

In keeping with the increased demand for quality "long-life" carbide tipped saw blades, Robert A. Bowes, Vice President of the Carbide Saw & Tool Company recently announced the details of that firm's new expansion program.

Engineering, Administration and Sales offices are now located at 327 South La Salle Street, Chicago 4, Illinois. All business matters such as Sales, Purchasing and Dealer Franchises will be handled from this location. Additional office personnel will facilitate sales and engineering correspondence that will greatly aid dealers in their sales efforts. Manufacturers desiring technical data and further information regarding "long-life" carbide tipped saws will receive such information promptly.

Additional machinery and equipment has been added to the production lines of this firm's plant located at 2009 West Iowa Street and enables the firm to provide "in today—out today" sharpening service. Mr. Bowes also stated that this increase in production facilities also cuts delivery time on new blades to a minimum.

Charles E. Kelly was appointed assistant sales manager.

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**3755 South Broadway Place**
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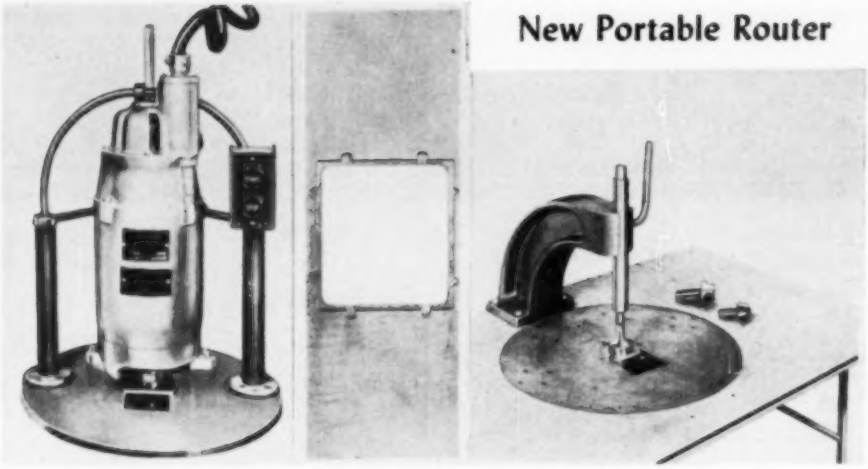
# New Portable Router



Left: The new Onsrud W-215 Heavy Duty Portable Router. Center: Plywood panel of sink top, cut out and trimmed with the W-215 Router. Right: Table Shaper or pin router, made with the W-215 Router and overarm bracket and guide pin.

## New Portable Router for High Speed, Heavy Duty Work

A new Onsrud unit, the W-215 Router, is now available for a wide variety of production operations in routing or shaping. It's built for routing four quarter and six quarter plywood and other heavy materials including aluminum. Application for this unit is in the routing out of open panels such as in plywood sink tops, window openings in trailer and coach bodies and shaping dinette tops to size (from plywood panels). The high speed rotation of the cutter results in a smooth edge free of any lifting of grain. The large plate fixture which is a part of the router also acts as a rest upon which the entire weight of the router rides as the work is performed. Many different similar operations can be performed, another typical one being the partial cut-out of window openings in plywood wall sections used in pre-fabricated houses.

The router unit is powered by a 5 H.P. Onsrud High Cycle Electric Motor with a spindle speed of 15,000 PM. Other uses for this router result from the fact that it can be adapted as the power unit for a table shaper. As Fig. 3 illustrates, the router is mounted upside-down in a metal or plywood table. By the addition of an overarm bracket and guide pin, the entire assembly becomes a combination table shaper or router. The router unit can be used with any shank type router bit or shaping cutter. If customers will build the table unit themselves, the W-125 Router with overarm bracket and guide pin provides a complete woodworking unit for routing and shaping at extremely low cost. The router is precision-made with grease-sealed bearings.

For complete information on the Onsrud W-215 Router, write the Onsrud Machine Works, Inc., 3922 Palmer Street, Chicago 47, Illinois . . . ask for Bulletin 1131.

### Florida Cypress Sawmill Burns

Fire did heavy damage to the largest cypress sawmill at Perry, Fla., last week. A big planing mill in the middle of the huge Lee Tidewater Cypress Co., at that place was destroyed, with estimated damages of $500,000. Hundred volunteers saved a mile-long lumber yard filled with logs worth more than $2,000,000, and the main sawmill.

### Furniture Plant at Lathrop, Mo.

"Considerable alterations are being made in a building at Lathrop where the manufacture of furniture will be started soon. Equipment is being installed in the building, on which a two-year lease has been obtained by William Tierney & Son, who specialize in the manufacture of chrome dinette sets of modern design," according to the *Missouri Newsletter*, May 1950.

Judge: "You say you shot your wife accidentally."

Prisoner: "She got in front of my mother-in-law just as I pulled the trigger."

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HIGH SPEED BAND SAWS

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WALNUT SQUARES

2 x 2 — 1½ x ½ 30′ 24′ 19′ 16′

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*Overnight Truck Delivery*

Also Persimmon Shuttle Blocks

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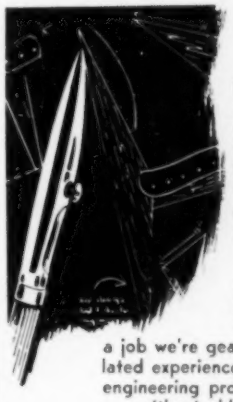

In either case, you'll be looking for a PRACTICAL solution based on keeping over-all production costs low, quality high, and selling prices in line. Only then can you feel reasonably assured of adequate profits on your investment.

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Main Plant: Louisville 9, Ky. • Branch: Montgomery, Ala.

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We are large manufacturers of some of the finest Beech lumber that Northern Michigan produces and can furnish promptly straight or mixed cars of 4/4, 5/4, 6/4 and 8/4 #1&Btr. or #2&Btr. This Northern Beech is moderately priced and we recommend its use and if you are not familiar with the wood—suggest you give it a try.

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Sales Office . . .
817 Railway Exchange
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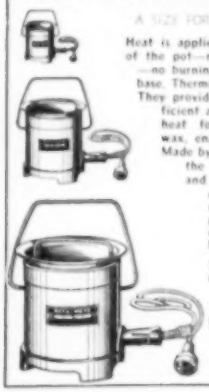
**Electric GLUE POTS**



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Heat is applied to the sides of the pot—not the bottom—no burning—no water in base. Thermostat regulated. They provide the most efficient and satisfactory heat for glue, resin, wax, enamels, tar, etc. Made by the pioneer in the field. Ordered and used by various U.S. Government departments, including the Navy.

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Northern Hardwood Veneers and Plywood in Birch, Maple, Plain Red and White Oak, Basswood and Ash. Also Plywood in Walnut, Mahogany and Quartered Oak.

QUALITY
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SALES OFFICE, MARSHFIELD, WIS.
Specializing in
GENUINE NORTHERN HARD MAPLE
All Thicknesses—All Grades—
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Special Attention to Furniture Requirements
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### Import Long Leaf Yellow Pine

Beaumont, Texas—A cargo of 200,000 of long-leaf yellow pine has arrived in the Beaumont port, which has been an exporter of long-leaf yellow pine for almost a half century. It is said that this is the first time that such a shipment has been imported here. The shipment was from Nicaragua, and was handled by the Standard Export and Lumber Company of New Orleans, La., a firm which has sent many a shipment of pine from Beaumont.

### Dependable Machine Co. Announces Contest Winners

Greensboro, N. C.—Dependable Machine Company of Greensboro, N.C., announced the winners of its Lucky Draw Contest here recently. Mayor Ben Cone of Greensboro, drew the names of the winners from the Lucky Draw container at the Dependable plant today.

Grand winner of $585 of Dependable Machinery was J. R. Bennett, Jr., of Greenville, Alabama. First prize consisted of a No. 104-A Universal Head Grinder complete with side head, molders head, straight knife, circular saw and Vonnegut molder head attachments. Mr. Bennett is a partner in the Curington-Bennett Lumber Company.

Second prize of a Dependable No. 98-A5 Full Automatic 30" Knife Grinder was won by William Tarver of the Timber Lumber Company, Conroe, Texas. Third and fourth prizes of Balancing Ways were won by M. B. Cauthen, Huntsville, Texas and J. H. Paulson, Farmville, Virginia.

Shown above (left to right) are John C. Inmon, president of Dependable Machine Company; Charles G. Monnett, sales manager of the company and Mayor Ben Cone of Greensboro taken at the drawing of Dependable's Lucky Draw Contest. Grand winner was J. R. Bennett, Jr. of the Bennett-Curington Lumber Company, Greenville, Alabama.

Shown above (left to right) are John C. Inmon, president of Dependable Machine Co.

**Subscribe to WOOD PRODUCTS**

### Wood Products Plant to Rebuild

The Ekco Product company, large Chicago kitchen and houseware items manufacturer, plans to rebuild the factory of E. L. Tebbets Spool company, Locke Mills, Maine, which was destroyed by fire last Feb. 26, it was learned at Marquette (Mich.) recently.

The Tebbets contract following the fire was awarded to the Munising Wood Products company plant at Marquette (Mich.) on a trial basis. The contract was lost when MWP and local 3190, Carpenters and Joiners union (AFL), became deadlocked in contract negotiations.

The plant of the Tebbets company, a subsidiary of the Ekco firm, had been the principal supplier of woodenware handles and other wood items to its parent firm. Damage from the fire was estimated at $250,000. The new plant is to be constructed at a cost of $400,000, scheduled to be in operation by November.

### Albert B. Moore Dies

Arkadelphia, Ark.—Albert B. Moore, 71-year-old former owner of lumber and stave mills in Texarkana and Camden, Ark., died at his home here May 28, 1950.

### Lumber Camp Foreman Dies

Nahma, Mich.—Peter Gaudette, 63, a veteran camp foreman for the Bay De Noquet Lumber Co., at Nahma, died recently at St. Francis hospital here. Diabetes caused his death.

FAMOWOOD

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FAMOWOOD PLASTIC

FAMOWOOD does an outstanding job in all plants that finish wood: **1 — Helps Increase Production. 2 — Cuts Production Costs. 3 — Reduces Labor Costs. 4 — Cuts Down Spoilage and Waste. TEST A SAMPLE — PROVE IT YOURSELF.**

**OTHER OUTSTANDING ADVANTAGES:**

Production plants like it immensely because **it speeds fine wood finishing.** It fills cracks quickly — dries quickly — doesn't shrink — sands easily — is water-proof and weatherproof when properly applied. IT HAS EVERYTHING YOU REQUIRE.

**COLORS TO MATCH YOUR WORK: 14—and White. Fir ● Walnut ● Mahogany ● Birch ● Oak ● Red Oak ● Maple ● Redwood ● Tupelo ● Cypress ● Cedar ● Alder ● Ash ● Red Gum.**

And CONVENIENTLY PACKED: 6 oz. cans to 11½ lb. (gallon) cans. . . . **Takes spirit dye stains freely, too.** . . . Also, it sticks to any clean surface like porcelain — tile — concrete — glass — etc.

**FAMOGLAZE:** The companion product that **fills hairline cracks and minor defects.** "Leaves a **Porcelain-like finish." The finest glazing plastic ever formulated.** Like **FAMOWOOD,** sticks tight to other products, too. . . . SNOW WHITE and MAHOGANY. . . . And **FAMOSOLVENT** — to keep **FAMOWOOD** and **FAMOGLAZE** in top-working condition.

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Use of Pheoll standard and special wood screws reduces overall assembly time and provides the means for joining parts tighter and stronger. Also, they improve the final appearance of your products.

These quality screws are made from cold forged blanks—individually turned, providing clean cutting edges free from nicks and burrs. The sharp gimlet-type point penetrates the wood for a straight and rapid driving start. Spiral threads seat firmly in the wood, providing a rigid bond that resists strain and vibration. Pheoll wood screws are available in slotted or Phillips recessed head types—in a broad range of sizes—all head styles, different metals and in all finishes. Ample stocks of steel and brass wood screws are always carried in stock.

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Northern Hardwoods, Hemlock, White Pine, Basswood, Cedar Shingles. Planing mill. Dry kilns. Rotary cut veneers.

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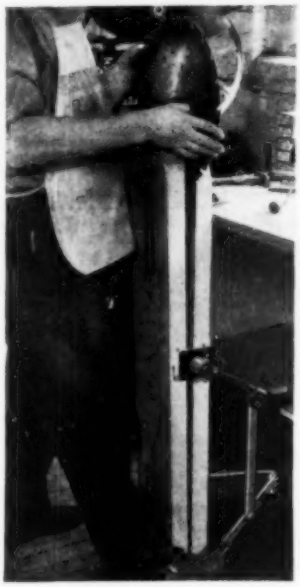

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***Quick Acting CIRCULAR SAW***

***FILING VISE***

For saws up to 30" diameter made of heavy lumber. Foot lever opens vise, saw placed on lug, release foot lever and vise closes. Spring tension holds saw securely. Unlike old style vises, it is not necessary to remove palm nut and bolt, simply press foot lever, hang saw on lug which does not run all the way through vise. Release foot and you are ready to file. This procedure will save a lot of time. Price F.O.B. Chicago, $62.50.

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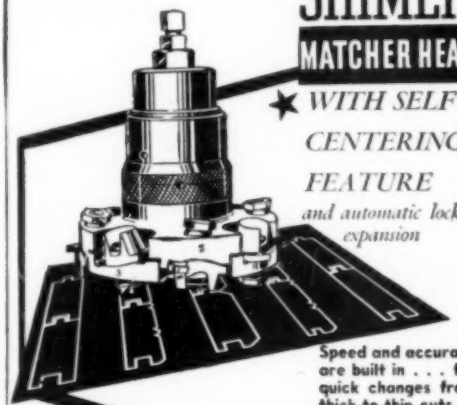
CLEAN, ACCURATE, FAST CUTTING

FLOORING -- CEILING -- SIDING -- WAINSCOTING

**SHIMER MATCHER HEAD**

★ *WITH SELF CENTERING FEATURE and automatic lock expansion*



**Speed and accuracy are built in . . . for quick changes from thick-to-thin cuts or pattern to pattern . . . with only one set of heads!**

*Write for* CATALOG AND PATTERN BOOK

Manufacturers Of The Shimer Cutter Head

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# MATTISON *NEW 303* "Delivers the Goods"

**SAYS: ALGOMA PLYWOOD AND VENEER CO.**

ALGOMA PLYWOOD & VENEER COMPANY
*Algoma, Wisconsin*
A DIVISION OF
UNITED STATES PLYWOOD CORPORATION

April 24, 1950

Mattison Machine Works
Rockford, Illinois

Attention: Mr. W. C. Hagstrom

Dear Mr. Hagstrom:

Your Mattison #303 Automatic Stroke Sander has been operating in our plant for the past six weeks, and every day we become more and more enthused about it. We have tried it on all of the various types of plywood and doors we manufacture, using all stroke lengths both long and short. The results are very gratifying.

Production from this machine is very close to 25% better than the Mechanical Type Stroke Sander, and this increased production is accomplished with less effort and less fatigue to the operator.

The mechanical simplicity of this unit with its minimum amount of moving parts will certainly reduce the routine maintenance cost.

After all a machine will produce only the amount of work it is given by the operator. With all controls at his finger-tips, with a delicate balance in the pressure handle, with consistent reversal of stroke, and with the high speed of the belt he cannot help but "deliver the goods".

Our present operator, one of our oldtimers who has operated all types of belt and stroke sanders, says that it is tops. In fact all of our belt sander operators, and we have several, have tried it and feel the same way.

We have already recommended this machine to several of our other manufacturing plants and also some of our competitors. Streamlined in appearance, simple in construction, efficient and easy in operation, it should make a lot of good friends in the woodworking industry.

Yours sincerely,

Ray P. Fulwiler

R. P. Fulwiler
Vice Pres. & Factory Mgr.

RPF:hd

Mr. Fulwiler of Algoma Plywood, with many years experience in wood finishing and various types of sanders, sent us this letter regarding the results obtained from the Mattison 303 Automatic Stroke Sander in their plant.

The facts brought out by Mr. Fulwiler suggests that the 303 may do as much for you. For further information ask for a copy of our new free circular.

**MATTISON MACHINE WORKS**
**ROCKFORD · ILLINOIS**